



North Dakota Resource Management Plan and Environmental Impact Statement

FINAL



North Dakota



JULY 1987

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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FINAL

**NORTH DAKOTA
RESOURCE MANAGEMENT PLAN/
ENVIRONMENTAL IMPACT STATEMENT**

Dickinson District Office
Bureau of Land Management
Department of the Interior

July 1987

Marvin LeNoue

Acting State Director
Montana and the Dakotas

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

222 North 32nd Street
P.O. Box 36800
Billings, Montana 59107

Dear Reader:

This proposed North Dakota Resource Management Plan and final Environmental Impact Statement is to be used in conjunction with draft plan and environmental impact statement issued in December 1986. The draft document analyzed four alternative management plans, including the preferred alternative, for approximately 67,571 acres of public surface and nearly 4.8 million acres of federal minerals administered by the Bureau of Land Management in North Dakota.

Comments and suggestions received during the public review of the draft plan and environmental impact statement did not require major changes to the document or the accompanying maps. Written comments on the draft, along with a summary of oral comments provided during four public meetings, are presented in this document. Responses to the comments and changes made to the text of the draft are also included. We have included a section titled How to Use This Document. This section describes how the various portions of the draft and this document compliment each other. This section also directs the reader to several key areas depending on the level of review desired. A limited number of the draft documents and accompanying maps is available at the Bureau of Land Management, Dickinson District Office, 202 East Villard, P.O. Box 1229, Dickinson, North Dakota 58602.

This concludes the Bureau of Land Management's evaluation of the proposed plan and alternatives. Issuance of a Record of Decision and implementation of the resource management plan will occur soon after the end of a 30-day protest period.

All parts of this plan may be protested. Protests should be sent to the Director (760), Bureau of Land Management, U.S. Department of the Interior, 18th and C Streets NW, Washington, D.C. 20240, within the 30-day protest period ending August 18, 1987. Protest statements should include the following information:

The name, mailing address, telephone number and interest of the person filing the protest.

A statement of the issue or issues being protested.

A statement of the part or parts of the plan being protested.

A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party, or an indication of the date the issue or issues were discussed for the record.

A concise statement explaining why the proposed decision is believed to be wrong.

At the end of the 30-day protest period, the proposed plan, excluding any portions under protest, will become final. Approval will be withheld on any portion of the plan under protest until final action has been completed. Any significant changes to the proposed plan made as a result of a protest will be made available for public review and comment prior to final approval and implementation.

Following final approval of the plan a "desk document" will be prepared that will consolidate and summarize all management guidance developed through the planning process. This document will be designed for the everyday use of Bureau of Land Management employees in the implementation of the resource management plan. A limited number of the desk documents will be available to the public upon request. Persons wishing to receive copies of the desk document should contact the Dickinson District Office, Bureau of Land Management, P.O. Box 1229, Dickinson, ND 58602; (701) 225-9148.

If requested, a hearing will be held prior to plan approval to discuss the proposed plan and its relationship to potential coal leasing. A hearing may be requested by any person having an interest which is, or may be, adversely affected by implementation of the plan. Request for a hearing should be made to Mark Stiles, Project Manager, Dickinson District Office, Bureau of Land Management, P.O. Box 1229, Dickinson, North Dakota 58602.

We thank the individuals and organizations who have participated in our planning process; helping us to prepare a plan that will lead to more effective and efficient management of public lands and minerals. Your interest is appreciated.

Sincerely,

Acting State Director

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RESOURCE MANAGEMENT PLAN FINAL ENVIRONMENTAL IMPACT STATEMENT

**LEAD AGENCY: DICKINSON DISTRICT OFFICE
DICKINSON, NORTH DAKOTA
BUREAU OF LAND MANAGEMENT
DEPARTMENT OF THE INTERIOR**

TYPE OF ACTION: Administrative

JURISDICTION OF ACTION: The entire state of North Dakota

ABSTRACT: The North Dakota Resource Management Plan/Final Environmental Impact Statement addresses future management options for 67,571 acres of public surface and about 4.8 million acres of federal minerals administered by the Bureau of Land Management, Dickinson District, located in Dickinson, North Dakota. The plan and environmental impact statement focus on four alternatives. These alternatives are based on themes ranging from the maximization of commodity resource production to the protection of amenity resources, and include the alternative of "No Action or Continuation of Present Management" and the proposed alternative. Each alternative prescribes management of resources and programs under the four identified planning issues: (1) coal leasing, (2) land pattern adjustment, (3) oil and gas leasing, and (4) off-road vehicle use designations. When the plan is finalized, it will provide a comprehensive framework for Bureau of Land Management activities in North Dakota for the next 15 or more years. The draft plan and environmental impact statement, and accompanying maps should be used in conjunction with this final environmental impact statement, which contains modifications and corrections to the draft and comments received during public review.

FOR FURTHER INFORMATION CONTACT: Mark Stiles, Project Manager, Dickinson District Office, 202 East Villard, P.O. Box 1229, Dickinson, North Dakota 58602; telephone (701) 225-9148.

SUMMARY

This Proposed North Dakota Resource Management Plan (RMP) addresses future management for approximately 67,571 acres of public land and 4.8 million acres of federal mineral estate administered by the Bureau of Land Management (BLM) through its Dickinson District Office in Dickinson, North Dakota. This RMP has been revised to incorporate comments on the Draft RMP/EIS received during the public review period of December 22, 1986 through March 25, 1987. Comments were received from 43 persons attending four public meetings and from 36 letters.

Some of the major comments on the draft included:

- there should be a greater range of alternatives
- the document overstates reclaimability of mined lands
- there should be more detailed air quality analyses performed
- there should be no protective stipulations placed on split estate
- the Lynch Knife River Flint Quarry area should not be excluded from further consideration for leasing or exchange of coal
- the Lynch Knife River Flint Quarry area should be excluded from further consideration for leasing or exchange of coal
- management decisions should provide protection for rare plants and animals and exemplary communities
- the draft plan does not propose "multiple use" consistent with law
- the plan should provide more protection to the visual qualities of National Park Service units
- there is presently inconclusive evidence regarding the historical significance of the A.C. Townley homestead.

Significant changes made to the plan and environmental analysis as a result of public comment include:

- rare plants and animals, and exemplary communities will be given special attention in all future management actions
- mitigation measures necessary for protection of visual qualities relating to National Park Service units will be considered in all future management plans
- the A.C. Townley homestead in the Golden Valley Coal Study Area has been returned to the area acceptable for further consideration for the leasing or exchange of coal in Alternatives B, C, and D
- approximately 2,320 acres were returned to the area acceptable for further consideration for coal leasing or exchange in the Dunn Center Coal Study Area as a result of corrections made to areas excluded under surface owner opposition and multiple-use tradeoffs
- more detailed management guidance was added for water and soil resources under all alternatives
- more detail and explanation of rationale has been provided for multiple-use tradeoffs in respect to coal.

Alternative C of the Draft RMP/EIS has become the Proposed RMP. The discussion of issues below is essentially the same as that appearing in the Draft RMP/EIS. However, most acreage figures have changed slightly.

PLANNING ISSUES

The BLM planning process is issue driven. Four issues were identified through public input, resource monitoring, and policy mandate during the scoping process for this RMP. These issues are areas of controversy, requiring resolution in the planning process.

(1) *Coal Leasing* — Areas of federal coal administered by BLM must be screened for potential for coal development, unacceptable environmental conflicts, and significant surface owner opposition to mining according to the four coal screens (43 CFR 3420.1-4). The application of the screens include consideration of all resources in the unsuitability criteria (43 CFR 3461) as well as other resources not specifically addressed by the criteria.

(2) *Land Pattern Adjustment* — Small, scattered, and isolated tracts of public land in North Dakota are often difficult or uneconomical to manage. Land pattern adjustments need to be made to improve multiple-use management and to increase resource values for the public.

(3) *Oil and Gas Leasing* — The uncertain timing, location, and resource impacts of oil and gas development require that potential impacts be analyzed during the planning process and that appropriate measures be prescribed to protect other significant resources. Lease stipulations need to be developed to avoid or mitigate impacts to other resources. Efficient development of oil and gas requires that stipulations are not more restrictive than necessary to accomplish multiple-use objectives.

(4) *Off-Road Vehicle Use Designations* — BLM has been mandated by executive order (EO 11644) to study and designate public lands as open, limited, or closed to off-road vehicle (ORV) use. Areas where ORV use may cause significant adverse environmental impacts need to be protected by appropriate use designations.

THE ALTERNATIVES

The formulation and analysis of alternatives is required by the Council of Environmental Quality regulations implementing the National Environmental Policy Act (40 CFR 1500.2(e)) and BLM resource management planning regulations (43 CFR 1610.4-5). The goal of each alternative is the resolution of the issues. Each alternative presents a complete and reasonable guide to future management of public lands and resources. Current management of non-issue resources and programs will continue under all alternatives considered.

Several alternatives were considered during the formulation process but were dropped from detailed study because they were unreasonable or did not adequately address the planning issues. Four alternatives were developed and analyzed in detail. Below are the major management actions and environmental impacts under each alternative. Further details are found in Tables 2-1 and 2-2.

Alternative A — No Action

Coal Leasing

A total of 391,179 acres are acceptable for further consideration for the leasing or exchange of coal. Leasing of this coal would support new mines and facilities in 13 coal study areas (CSAs). Mining and related facility operation would cause significant long-term decreases in air quality due to increased particulates and sulfur dioxide (SO₂) in the planning area. Short-term soil erosion, compaction, instability, and loss of productivity would occur on up to 391,179 acres. Long-term erosion would occur on up to 2,793 acres of steep slopes. Mining would cause a short-term decrease in recharge of ground water and could cause short- and long-term losses in the quality and quantity of ground water. A short-term loss of vegetative productivity would occur on all mined acreages. A long-term loss of vegetative diversity would occur on areas of native prairie. The mining of up to 47,373 acres of wooded draws would cause long-term losses in important wildlife habitat and associated populations. Agricultural production would have a short-term loss on up to 274,000 acres of cropland. An estimated 156,782 eligible cultural resource sites could be adversely affected. Construction of mines and facilities would cause long-term increases in local populations and income while creating short- and long-term social problems in areas surrounding the 13 CSAs able to support new mines and facilities.

Oil and Gas Leasing

Special stipulations in addition to Montana BLM Standard Stipulations are applied to new oil and gas leases on up to 29,136 acres. New leases on the remaining 431,258 acres would include only standard stipulations. Oil and gas development on up to 459,298 acres would cause long-term increases in odor and potential health problems due to increased amounts of hydrogen sulfide (H₂S) and SO₂ in the air. Special stipulations would cause long-term increases in oil and gas development costs on up to 29,136 acres. There may be long-term losses in the quality and quantity of ground water on all developed acreages. Special stipulations would protect wildlife habitats and species on 29,136 acres. Significant long-term losses of habitats and species are expected on up to 178,077 acres. Hunting and other recreational opportunities would experience a long-term loss of quality on up to 459,298 acres. Visual quality of the landscape would decrease similarly. Unhindered oil and gas development on 459,298 acres would continue to provide long-term local employment and severance tax income to the state.

Land Adjustment

A total of 9,539 acres of public land are identified for disposal or exchange. Preferred acquisition areas are lands adjacent to Big Gumbo and Lost Bridge areas. Disposal would complicate administration of oil and gas leases. Adjustment would improve manageability of public lands, thereby increasing the long-term quality of water resources, wildlife habitat, recreation, and range production. The possible disposal of up to 9,539 acres would be a long-term loss of these lands to the public land base. Adjustment could adversely affect up to 77 cultural resources.

Off-Road Vehicle Use Designations

No ORV designations have been made; all 67,571 acres of public lands are open to ORV use. Long-term soil erosion

and compaction problems would be perpetuated in local areas. Losses of vegetation, wildlife habitat, cultural resources and disturbance of wildlife would have long-term but minor impacts. Long-term ORV recreational opportunities would be maintained.

Alternative B

Coal Leasing

A total of 599,496 acres are acceptable for further consideration for the leasing or exchange of coal. Of these, 152,487 acres have special stipulations. Leasing of this coal would support new mines and facilities in 16 of 24 CSAs. Mining and facility construction would cause significant long-term decreases in air quality due to increased particulates and SO₂ in the planning area. Short-term soil erosion, compaction, instability, and loss of productivity would occur on up to 599,496 acres. Long-term erosion would occur on up to 79,478 acres of steep slopes. Mining would cause a short-term decrease in recharge of ground water and could cause short- and long-term losses in the quality and quantity of ground water. A short-term loss of vegetative productivity and long-term loss of vegetative diversity would occur on all mined acreages. The mining of up to 29,387 acres of wooded draws would cause long-term losses in wildlife populations. Special stipulations would ensure restoration of 152,487 acres of important wildlife habitats. Agricultural production would have a short-term loss on up to 384,000 acres. An estimated 239,119 eligible cultural resource sites could be adversely affected. Construction of mines and facilities would cause long-term increases in local populations and income while creating short- and long-term social problems in up to 16 of 24 CSAs.

Oil and Gas Leasing

New oil and gas leases on up to 460,394 acres are subject only to Montana BLM Standard Stipulations. Oil and gas development on these acreages would cause long-term increases in odor and potential health problems due to increased amounts of H₂ and SO₂ in the air. There may be long-term losses in the quality and quantity of ground water on all developed acreages. Significant long-term losses of wildlife habitats and species are expected on up to 206,117 acres. Hunting and other recreational opportunities would experience a long-term loss of quality on up to 460,394 acres. Visual quality of the landscape would decrease similarly. Unhindered oil and gas development on 460,394 acres would continue to provide long-term local employment and severance tax income to the state.

Land Adjustment

A total of 38,680 acres of public land are identified for disposal or exchange. Exchanges would be made to acquire lands adjacent to Big Gumbo and Lost Bridge areas. Disposal would complicate administration of oil and gas leases. Adjustment would improve manageability of public lands, thereby increasing the long-term quality of water resources, wildlife habitat, recreation, and range production. The possible disposal of up to 38,680 acres would be a long-term loss of these lands to the public land base. Adjustment could adversely affect up to 311 cultural resources.

Off-Road Vehicle Use Designations

All 67,571 acres of public lands are designated open to ORV use. Long-term soil erosion and compaction problems

would be perpetuated in local areas. Losses of vegetation, wildlife habitat, cultural resources and disturbance of wildlife would have long-term but minor impacts. Long-term ORV recreational opportunities would be maintained.

Alternative C — Proposed

Coal Leasing

A total of 573,868 acres are acceptable for further consideration for the leasing or exchange of coal. Of these, 198,923 acres have special stipulations. Leasing of this coal would support new mines and facilities in 15 of 24 CSAs. Mining and facility construction would cause significant long-term decreases in air quality due to increased particulates and SO₂ in the planning area. Short-term soil erosion, compaction, instability, and loss of productivity would occur on up to 573,868 acres. Steep slopes would be protected from erosion. Mining would cause a short-term decrease in recharge of ground water and could cause short- and long-term losses in the quality and quantity of ground water. A short-term loss of vegetative productivity would occur on all mined acreages. A long-term loss of vegetative diversity would occur on areas of native prairie. The mining of up to 16,771 acres of wooded draws would cause long-term losses in wildlife populations. Special stipulations would ensure restoration of up to 149,470 acres of important wildlife habitats and protect up to 12,318 acres of buried-valley aquifers, and up to 36,225 acres of National Park unit viewsheds. Agricultural production would have a short-term loss on up to 381,000 acres. An estimated 229-1,143 eligible cultural resource sites could be adversely affected. Construction of mines and facilities would cause long-term increases in local populations and income while creating short- and long-term social problems in up to 15 of 24 CSAs.

Oil and Gas Leasing

New oil and gas leases on up to 206,811 acres have special stipulations in addition to Montana BLM Standard Stipulations. Leases on the remaining 253,583 acres would have standard stipulations only. Oil and gas development on these acreages would cause long-term increases in odor and potential health problems due to increased amounts of H₂S and SO₂ in the air. Special stipulations would cause long-term increases in oil and gas development costs on up to 206,811 acres. There may be long-term losses in the quality and quantity of ground water on all development acreages. Special stipulations would protect key wildlife species and habitats. Hunting and other recreational opportunities would experience a long-term loss of quality on up to 460,394 acres. Visual quality of the landscape would decrease similarly. Unhindered oil and gas development on up to 253,583 acres would continue to provide long-term local employment and severance tax income to the state.

Land Adjustment

A total of 22,739 acres of public land are identified for disposal or exchange. An additional 11,715 acres are identified for exchange only. Exchanges would be made to acquire lands within the Big Gumbo and Lost Bridge consolidation areas and lands adjacent to isolated retention tracts. Disposal would complicate administration of oil and gas leases. Adjustment would improve manageability of public lands, thereby increasing the long-term quality of water resources, wildlife habitat, recreation, and range production. The possible disposal of up to 22,739 acres

would be a long-term loss of these lands to the public land base. Adjustment would adversely affect up to 183 cultural resources.

Off-Road Vehicle Use Designations

ORV use on 22,164 acres in the Big Gumbo area is limited to maintained roads from March 1 to June 1 and open the remainder of the year. All other public lands are designated open to ORV use. Long-term soil erosion and compaction problems would be perpetuated in local areas. Losses of vegetation, wildlife habitat, cultural resources, and disturbance of wildlife would have long-term but minor impacts on 45,407 acres. Long-term ORV recreational opportunities would be maintained in this acreage.

Alternative D

Coal Leasing

A total of 487,072 acres are acceptable for further consideration for the leasing or exchange of coal. Of these, 143,725 acres have special stipulations. Leasing of this coal would support new mines and facilities in 14 of 24 CSAs. Mining and facility construction would cause significant long-term decreases in air quality due to increased particulates and SO₂ in the planning area. Short-term soil erosion, compaction, instability, and loss of productivity would occur on up to 487,072 acres. Losses would be minimized because no slopes over 15 percent are included. Mining would cause a short-term decrease in recharge of ground water and could cause short- and long-term losses in the quality and quantity of ground water. A short-term loss of vegetative productivity would occur on all mined acreages. A long-term loss of vegetative diversity would occur on areas of native prairie. The mining of up to 6,117 acres of wooded draws would cause long-term losses of wildlife populations. Special stipulations would ensure restoration of up to 111,030 acres of important wildlife habitats, and would help to protect visual qualities on up to 32,695 acres within National Park unit viewsheds. Agricultural production would have a short-term loss on up to 332,000 acres. An estimated 194-969 eligible cultural resource sites could be affected. Construction of mines and facilities would cause long-term increases in local populations and income while creating short- and long-term social problems in up to 14 of 24 CSAs.

Oil and Gas Leasing

New oil and gas leases on up to 107,314 acres would have special stipulations in addition to Montana BLM Standard Stipulations. Only standard stipulations apply to another 253,583 acres while up to 99,497 acres are closed to new leases. Oil and gas development would cause long-term increases in odor and potential health problems due to increased amounts of H₂S and SO₂ in the air. Closure of 99,497 acres would cause a long-term loss of potential production on these acreages. Special stipulations would cause long-term increases in oil and gas development costs on up to 107,314 acres. There may be long-term losses in the quality and quantity of ground water on all developed acreages. Special stipulations and closures would protect key wildlife species and habitats. Hunting and other recreational opportunities would experience a long-term loss of quality on up to 360,897 acres. Visual quality of the landscape would decrease similarly. Unhindered oil and gas development on 253,583 acres would continue to provide long-term local employment and severance tax income to the state.

Land Adjustment

No public lands are identified for exchange or disposal. Outside applications for exchange or disposal would be reviewed on a case-by-case basis. Lack of an adjustment program may forego the opportunity to consolidate lands for better resource management.

Off-Road Vehicle Use Designations

ORV use on 22,164 acres in the Big Gumbo area is limited to maintained roads from March 1 to June 1 and limited to roads and trails the remainder of the year. All other public lands are designated open to ORV use. Long-term soil erosion and compaction problems would be perpetuated in local areas. Losses of vegetation, wildlife habitat, cultural resources and disturbance of wildlife would have long-term but minor impacts on 45,407 acres. Long-term ORV recreational opportunities would be maintained in this acreage.

CONCLUSION

The impacts of the four alternatives tend to be similar in quality but substantially different in the numbers of acres affected by given management actions. Alternative C is the proposed RMP because it presents a reasonable balance between commodity production and protection of amenity resources.

HOW TO USE THIS DOCUMENT

The draft North Dakota Resource Management Plan and Environmental Impact Statement released in December, 1986 analyzed four alternative management plans and identified a preferred alternative. The draft was made available for public review and comment December 22, 1986 through March 25, 1987. All comments received during the review period were analyzed and used to develop the proposed plan presented in this document. This document includes reproductions of the written comments received and a summary of oral comments provided during four public meetings. Responses are provided to all comments received.

This document includes portions of the material presented in the draft, responses to comments, and changes or additions made as a result of public review. Chapter One — Introduction and Purpose and Need for Action, Chapter Two — Alternatives and Chapter Five — Consultation and Coordination have been reprinted entirely. Appendices critical to the explanation of the alternatives have also been reprinted here. These chapters and appendices include changes made following public review. All changes and additions are highlighted in bold print. Other sections, such as Glossary, Literature Cited, and List of Acronyms have also been reprinted here for your convenience.

Two chapters presented in the draft, Chapter Three — Affected Environment and Chapter Four — Environmental Consequences, are not reprinted in this document. Also, appendices and maps included in the draft which serve as support to these two chapters are not included here. Changes and additions to be made to those portions not reprinted are identified in this document under the heading of Errata and Changes To Text — Chapters Three and Four, Appendices H, I, J, L, M, and O, and Maps.

The material presented in this document and portions of the draft plan and environmental impact statement referred to under "Errata and Changes To Text" represent

the complete environmental impact statement for the North Dakota Resource Management Plan. Alternative C, as presented in Chapter Two of this document, is the proposed plan for Bureau of Land Management actions in North Dakota. The relationship between the draft plan and environmental impact statement and this final plan and environmental impact statement is depicted in Figure 1.

SUGGESTIONS FOR USE

This document is organized in a manner that allows several levels of review.

- (1) If you desire only a brief overview of the proposed resource management plan and final environmental impact statement, you should review the Summary. Substantial changes to the draft and key or frequent public comments are identified in the Summary.
- (2) If you wish to review a more detailed explanation of the alternative plans considered, including the proposed plan, and a summary of projected environmental consequences of each plan, see Chapter Two — Alternatives.
- (3) If you would like to review the public comments provided on the draft and our responses, see Public Comments and Responses. A list of persons, agencies, and organizations that provided written comments is presented at the start of Public Comments.
- (4) If you are interested in reviewing descriptions of the existing environment, detailed environmental consequences, and related supporting material (including maps), see the draft document. Changes and additions which have been made to these portions of the draft are presented under Errata and Changes To Text in this document.
- (5) If you have only specific concerns, see Index in this document.

Figure 1. Relationship between draft and final documents.

Portion of Draft		Portion of Final
Summary	→ revised and reprinted →	Summary
Chapter One	→ revised and reprinted →	Chapter One
Chapter Two	→ revised and reprinted →	Chapter Two
Chapter Three	→ revised →	Errata and Changes to Text
Chapter Four	→ revised →	Errata and Changes to Text
Chapter Five	→ revised and reprinted →	Chapter Five
Glossary	→ revised and reprinted →	Glossary
Index	→ revised and reprinted →	Index
Literature Cited	→ revised and reprinted →	Literature Cited
Appendix A	→ revised and reprinted →	Appendix A
Appendices B,C,D,E,F,& G	→ revised and combined →	Appendix B
Appendix H	→ revised →	Errata and Changes to Text
Appendix I	→ revised →	Errata and Changed to Text
Appendix K	→ revised →	Errata and Changes to Text
Appendix L	→ revised →	Errata and Changes to Text
Appendix M	→ revised →	Errata and Changes to Text
Appendix N	→ revised and reprinted →	Appendix D
Appendix O	→ revised →	Errata and Changes to Text

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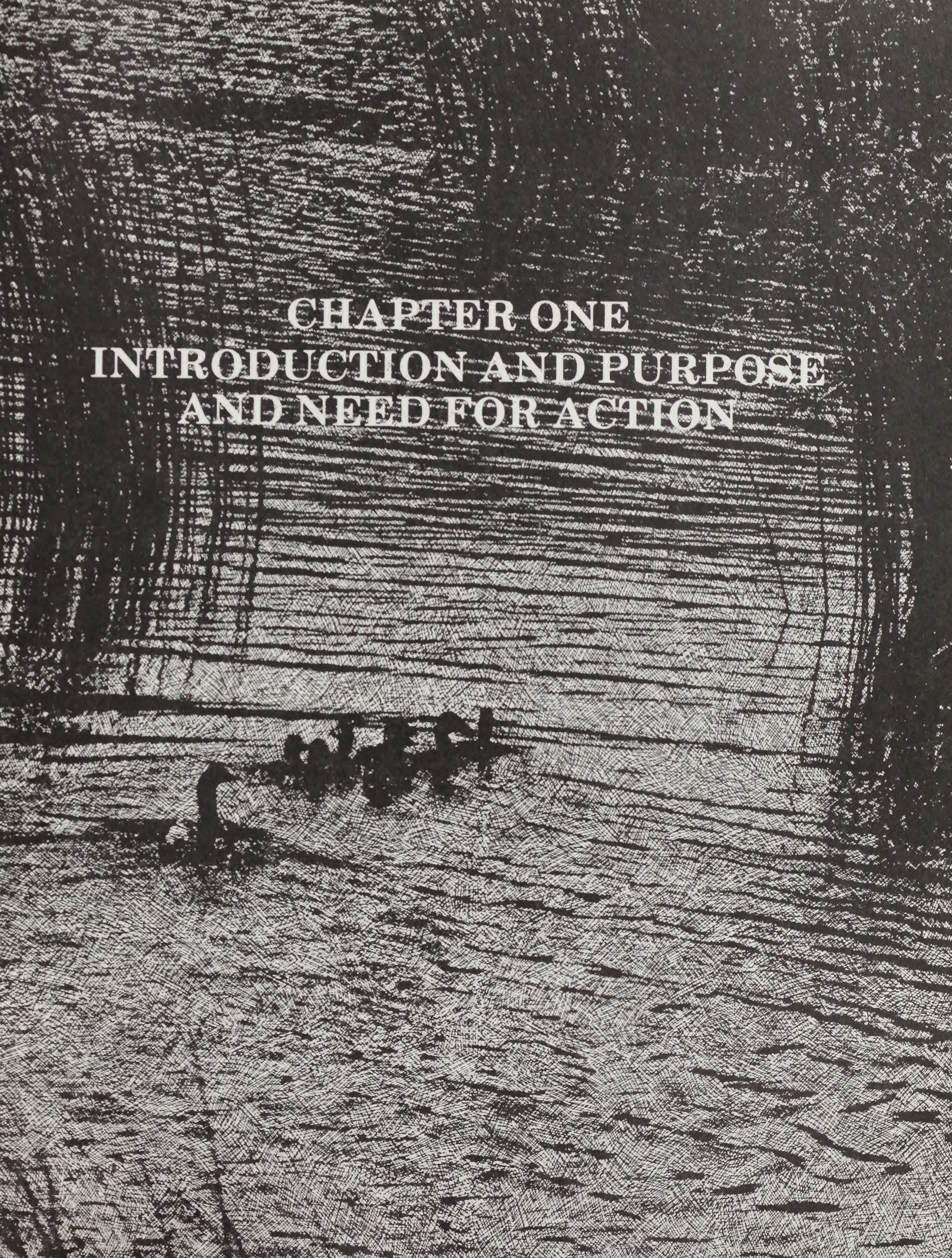
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ACRONYMS

AAQS	Ambient Air Quality Standards
ACEC	Areas of Critical Environmental Concern
ACHP	Advisory Council on Historic Preservation
AMP	Allotment Management Plan
APD	Application for Permit to Drill
AQRV	Air Quality Related Values
ARPA	Archaeological Resources Protection Act
ASCS	Agricultural Stabilization and Conservation Service
AUM	Animal Unit Month
AVF	Alluvial Valley Floor
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	Best Management Practices
Btu	British Thermal Unit
C & MU	Classification and Multiple Use
CFR	Code of Federal Regulations
CRMP	Coordinated Resource Management Plan
CSA	Coal Study Area
DEIS	Draft Environmental Impact Statement
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
FLPMA	Federal Land Policy Management Act
FY	Fiscal Year
HMP	Habitat Management Plan
KRF	Knife River Flint
LCC	Land Capability Class
MFP	Management Framework Plan
MM	Million
MMCF	Million Cubic Feet
MOU	Memorandum of Understanding
MSA	Management Situation Analysis
MSO	Montana State Office
NDGFD	North Dakota Game and Fish Department
NDPRD	North Dakota Parks and Recreation Department
NDPSC	North Dakota Public Service Commission
NDS DH	North Dakota State Department of Health
NDSU-AES	North Dakota State University-Agricultural Experiment Station
NEPA	National Environmental Policy Act
NOS	Notice of Staking
NPS	National Park Service
NRHP	National Register of Historic Places
NSO	No Surface Occupancy
NTL	Notice to Lessee
NWF	National Wildlife Federation
ORV	Off-Road Vehicle
OSMRE	Office of Surface Mining Reclamation and Enforcement
PILT	Payment in Lieu of Taxes
PSD	Prevention of Significant Deterioration
R & PP	Recreation and Public Purposes Act
RMP	Resource Management Plan
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SCS	Soil Conservation Service
SHPO	State Historic Preservation Officer
SMA	Surface Management Agency
SMCRA	Surface Mining Control and Reclamation Act
TSP	Total Suspended Particulates
USDC	U.S. Department of Commerce
USDL	U.S. Department of Labor
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WMP	Watershed Management Plan

cfs	cubic feet per second
gpm	gallons per minute
hr	hour
km	kilometer
l	liter
kv	kilovolt
lb	pound
m	meter
mg	milligram
mph	miles per hour
mw	megawatt
ppm	parts per million
ug/m ³	micrograms per cubic meter



CHAPTER ONE INTRODUCTION AND PURPOSE AND NEED FOR ACTION

CHAPTER ONE

INTRODUCTION AND PURPOSE AND NEED FOR ACTION

This document consists of a proposed resource management plan (RMP) and a final environmental impact statement (FEIS). **The draft plan and environmental impact statement were released for public review in December of 1986. This final document incorporates comments and suggestions made on the draft during the 90-day public review period. Also included are minor corrections and needed additions identified by the Bureau of Land Management (BLM) after publishing.** The RMP has been prepared in accordance with the Federal Land Policy and Management Act (FLPMA) and the BLM's planning regulations, 43 CFR 1600. The DEIS has been prepared in accordance with the Council on Environmental Quality regulations for implementing the National Environmental Policy Act (NEPA), 40 CFR 1500.

PURPOSE AND NEED

The North Dakota RMP provides a single comprehensive land use plan for all BLM resource management responsibilities in the state. This master plan will determine the resource condition objectives, allocation of public land resources to various uses, and specific methods of managing those resources. Management decisions presented in this plan will remain in effect until the plan is amended, revised or replaced by a new plan. If significant changes occur in the proposed land uses of the planning area the RMP will be amended or revised.

This RMP will replace all management direction established in the four Management Framework Plans (MFPs) completed for BLM-administered resources in North Dakota during the late 1970s and early 1980s. In addition, the RMP will replace management decisions made following the development of the North Dakota Grazing Environmental Impact Statement (EIS) and the Dickinson District Oil and Gas Environmental Assessment (EA). Previous planning and environmental documents were prepared in a variety of formats and contained varying levels of detail **and in some cases responded to regulations or policy that have since been revised (e.g., Federal Coal Management; USDI 1985a).** In addition, portions of the lands and minerals in North Dakota for which the BLM is the managing agency were not considered in previous land use decisions. This RMP will consolidate all major land use decisions under a single format for BLM-administered lands and minerals in the state.

DESCRIPTION OF THE PLANNING AREA

This document proposes a RMP for all public lands and federal minerals in North Dakota for which the BLM is the sole management agency. A total of **67,571** acres of public lands are located in North Dakota, primarily in Dunn and

Bowman Counties. Most of the public lands in these two counties are situated in two major blocks. In Dunn County 15,989 acres make up the Lost Bridge area and in Bowman County about 22,164 acres are situated in the Big Gumbo area. The remaining public lands are situated in small, isolated tracts scattered throughout the state.

There is a total of approximately 5.8 million (MM) acres of federally-managed minerals in North Dakota. Federal minerals are located under surface lands managed by various federal agencies, including BLM, the U.S. Forest Service (USFS), and the U.S. Corps of Engineers (Table 1-1).

Federal minerals are also located under state or privately owned surface. This RMP proposes management strategies for federal minerals located under BLM-administered surface and under **state and private** lands not situated within the administrative boundaries of other federal land management agencies. Land use planning for federal minerals located within the administrative boundaries of other federal agencies is conducted by the appropriate surface managing agency.

This plan and FEIS will consider approximately 4.8 MM acres of federal minerals. Most of this acreage is located in the western one-half of the state. The bulk of this total mineral acreage, approximately 4.2 MM acres, is federal coal reservation only. An additional 460,394 acres are federal oil and gas reservation only; and the remaining federal minerals are made up of all minerals, coal and oil and gas only, or other combinations.

TABLE 1-1
FEDERAL OWNERSHIP OF SURFACE, COAL, AND
OIL AND GAS ESTATES WITHIN NORTH DAKOTA¹

Federal Agency	Coal Acres ³	Surface Acres ²	Oil and Gas Acres ³
Bureau of Land Management	4,200,000	67,571	460,394
U.S. Forest Service		1,105,545	963,285
Bureau of Reclamation		10,089	1,388
U.S. Fish and Wildlife Service		417,138	8,371
Army Corps of Engineers		559,077	9,807
U.S. Air Force		12,347	0
Bureau of Indian Affairs		762	0
National Park Service		71,057	10,444
TOTALS	4,200,000	2,243,586	1,453,689

¹ Agencies with minor ownership not included. Other categories of mineral ownership (e.g. acquired minerals, all minerals, restricted minerals) are not listed.

² Public Land Statistics 1984. BLM figure modified to reflect recent land pattern adjustment.

³ BLM Dickinson District Inventory Record. Includes all oil and gas rights administered by BLM and USFS and on Public Domain Lands of other agencies.

Public lands in North Dakota constitute about three percent of all federally-administered surface in the state. Other major federal land systems in the state include the Little Missouri and Sheyenne National Grasslands, Theodore Roosevelt National Park, Corps of Engineers lands surrounding Lakes Sakakawea and Oahe, and National Wildlife Refuges and Waterfowl Production Areas.

There are five Indian Reservations in North Dakota: Standing Rock, Fort Totten, Turtle Mountain, Sisseton, and Fort Berthold. Of these, Fort Berthold and Standing Rock Reservations are closest in proximity to major BLM land and mineral responsibilities.

THE PLANNING PROCESS

The BLM resource management planning process has nine steps. Figure 1-1 lists the planning steps and highlights where public participation is needed.

Step 1. Identification of Issues

This step identifies resource management concerns, conflicts, and opportunities that can be resolved through the planning process. This process is called scoping and involves public participation.

Step 2. Development of Planning Criteria

This step identifies the information needed to resolve issues, formulate and evaluate alternatives, and select the preferred alternative. The criteria are circulated for public review.

Step 3. Collection of Inventory Information

This step collects the data needed to resolve resource issues and other environmental, social, and economic concerns.

Step 4. Analysis of the Management Situation

This step assesses the current situation and provides a baseline for development of a RMP. A Management Situation Analysis (MSA) document is produced that describes the physical situation, current management guidance, and resource problems and opportunities. The MSA is generally a reference document, only, and is not distributed to the public.

Step 5. Formulation of Alternatives

This step prepares several complete, reasonable resource management alternatives. A "no action" alternative describes present management while other alternatives place emphasis on environmental protection or resource production.

Step 6. Analysis of Impacts of Alternatives

This step analyzes the physical, biological, economic, and social impacts of implementing each alternative.

Step 7. Selection of the Preferred Alternative

This step compares the impacts of each alternative and selects the preferred alternative. The interdisciplinary process used in Steps 5 through 7 is documented in a draft RMP/EIS and circulated for public review.

Step 8. Selection of the Resource Management Plan

This step analyzes public comments, modifies the alternatives as appropriate, and serves as a basis for the management plan. The proposed RMP and final EIS is distributed

to the public in the final RMP/EIS document. A 30-day protest period is allowed before the RMP is adopted. A Record of Decision is published after consideration of any protests.

Step 9. Monitoring and Evaluation

This step involves monitoring and evaluating the resource conditions as the plan is implemented. If monitoring shows that resource issues are not being satisfactorily resolved or that the desired results outlined by the RMP are not being met, the plan may be amended or totally revised.

Coal Planning

In addition to the BLM planning process, there are four land use planning requirements of the federal coal management regulations (43 CFR 3420.1-4). Prior to the leasing of federal coal, the following four screens must be applied during land use planning:

- (1) Identification of areas with coal development potential,
- (2) Application of the 20 unsuitability criteria (43 CFR 3461.1),
- (3) Identification of multiple-use tradeoffs, and
- (4) Identification of significant surface owner opposition to the surface mining of federal coal.

Based on the application of these four screens, a determination is made in the land use plan of lands acceptable for further consideration for the leasing of coal. The decisions to lease and allow mining are not made during the development of a RMP but are further analyzed through detailed environmental analysis following land use planning (**Appendix A to this document**). Detailed discussions of the four coal screens and their application in this planning effort are provided in **Appendix B to this document**.

ISSUES

The BLM planning process is issue driven. The development of management proposals is based on the issues identified through public input, resource monitoring and regulatory or policy mandate.

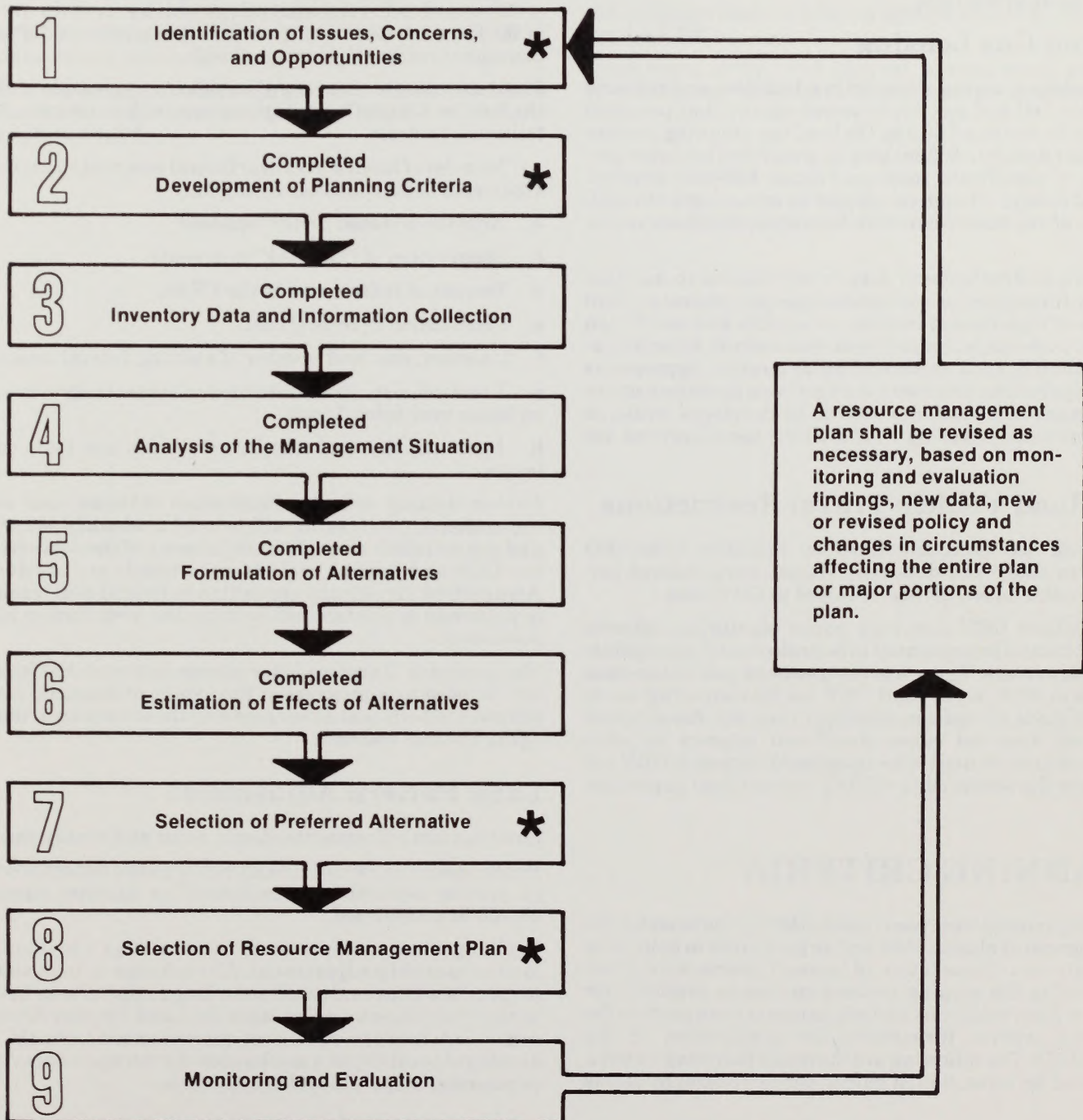
Four issues were identified during the scoping process for this RMP: Coal Leasing, Land Pattern Adjustment, Oil and Gas Leasing, and Off-road Vehicle (ORV) Use Designations. Many related concerns identified through public comment have been included in the four basic issues.

Coal Leasing

The federal coal leasing process, opinions expressed by the public, and the principles of multiple resource management require that areas with potential for the leasing and development of federal coal be analyzed through a comprehensive land use plan and environmental analysis. Areas of federal coal will be screened for coal development potential, unacceptable environmental conflicts, and significant surface owner opposition to mining.

The four coal screens (43 CFR 3420.1-4) need to be applied to coal administered by the BLM in North Dakota except for areas underlying surface administered by other federal agencies. The application of the coal screens must include

FIGURE 1-1
STEPS IN THE
RESOURCE MANAGEMENT
PLANNING PROCESS



* Steps Requiring Public Participation

consideration of all resources included in the unsuitability criteria (43 CFR 3461) as well as other resources not specifically addressed by the criteria.

Land Pattern Adjustment

Small scattered and isolated tracts of Bureau-administered surface are difficult or uneconomic to manage. Land pattern adjustments need to be made to enhance multiple-use management and to increase multiple resource values on public lands in the state.

Oil and Gas Leasing

The uncertain nature of the timing, location, and resource impacts of oil and gas development require that potential impacts be analyzed during the land use planning process and that appropriate measures be prescribed to ensure protection of significant resource values. Efficient development of federal oil and gas should be encouraged through the use of the least restrictive leasing stipulations necessary.

Oil and gas development may cause impacts to habitats used by threatened or endangered species, migratory bird species of high federal interest, or wildlife species of high interest to the state. Impacts can also occur to other important resources such as air and water quality. Appropriate lease stipulations necessary to avoid or mitigate impacts to these important resources need to be developed while, at the same time, ensuring that multiple-use objectives are met.

Off-Road Vehicle Travel Restrictions

The BLM has been mandated by executive order (EO 11644) to study and designate Bureau-administered surface as either open, limited or closed to ORV uses.

Areas where ORV use may cause significant adverse environmental impacts need to be protected by appropriate use designations. These use designations can either close an area to ORV use or limit ORV use by restricting use to specific kinds of vehicles, season of year, etc. Areas where ORV use does not cause significant impacts to other resources or users need to be designated as open to ORV use to ensure the availability of ORV recreational opportunities.

PLANNING CRITERIA

Planning criteria were used in this RMP as the basis for the development of alternatives and as guidelines to help focus the analysis and resolution of issues. Criteria were developed during the scoping process and made available for public review. Additions and adjustments were made to the planning criteria throughout the preparation of the RMP/DEIS. The following are the major planning criteria, organized by issue, which guided the development of this plan.

Coal Leasing

Areas of significant oil and gas production will not be considered acceptable for coal leasing until coal values outweigh the oil and gas values.

Areas containing cultural resources of regional or national significance will not be considered acceptable for further consideration for the leasing of coal.

Areas having high concentrations of woody draws or wetlands which are valuable for wildlife habitat and/or the maintenance of key watershed values will be excluded from further consideration for the leasing of coal.

Other areas containing regionally significant or unique resources which are not covered by the unsuitability criteria and either: (1) would experience unmitigable impacts, or (2) contain other resource values which exceed the value of the foregone coal resource, will be excluded from further consideration for the leasing of coal.

The determination of areas of significant opposition under the Surface Owner Consultation screen will be based on the following factors:

- Number of landowners over federal coal within the coal study area (CSA) opposed to leasing;
- Acreage included under "opposed";
- Distribution of "opposed" comments;
- Percent of federal coal in the CSAs;
- Distribution of federal coal;
- Location, size, and number of existing federal leases;
- Location, size, and number of surface lease agreements on lands over federal coal;
- Location, size, and number of private and state coal leases.

Factors dealing with the distribution of leases, coal and opposition to coal leasing will be used to identify patterns and assess relative significance in terms of the portions of the CSA and federal coal resource which are involved. Areas where significant opposition to federal coal leasing is patterned in clusters will be excluded from further consideration.

The existence of surface lease agreements and coal leases will be used as a measure of the extent of financial commitment of both coal developers and those owning or managing the coal resource.

Land Pattern Adjustment

Land pattern adjustments should occur at a steady rate.

Public lands that would maximize the public benefit if held in private ownership or managed by another agency should be transferred.

Exchanges are to be preferred over sales as a method of land **ownership adjustment**. All exchange or acquisition proposals will be evaluated according to the criteria listed in the State Director's Guidance for Land Pattern Review and Land Adjustment. Local review criteria should be developed to establish a mechanism for site specific review of potential disposals and acquisitions.

Oil and Gas Leasing

Lease stipulations will be developed for all areas of federal oil and gas where BLM has primary responsibility for surface and/or subsurface protection under 40 CFR 1500 and 43 CFR 3100.

All areas known to contain natural resource values of regional or national importance should be identified in the plan and appropriate lease stipulations should be developed.

Wetlands and riparian areas should be protected through the use of lease stipulations.

Necessary ORV designations should be incorporated into oil and gas leasing stipulations.

Off-Road Vehicle Use Designations

ORV use designations should be made on all BLM-administered surface lands.

ORV use in areas containing high wildlife values should be restricted to minimize disruption of wildlife habitats or population needs.

ORV use in areas having excessively erosive soils or moderately steep or steeper slopes should be restricted.

ORV use within riparian areas should be restricted as appropriate.

Non-restrictive “open” ORV use designations should be made on all BLM-administered surface lands which would not be significantly adversely impacted by ORV use.

Nonissue Resources and Programs

All nonissue resources and programs should be addressed by the RMP.

Objectives, goals, and general management guidance should be prescribed for nonissue resource programs.



CHAPTER TWO

ALTERNATIVES

CHAPTER TWO

ALTERNATIVES

ALTERNATIVE FORMULATION

The formulation and analysis of alternatives are required by the Council on Environmental Quality regulations implementing the NEPA (40 CFR 1500.2(e)) and BLM resource management planning regulations (43 CFR 1610.4-5). Each alternative represents a complete and reasonable plan to guide future management of public lands and resources. One alternative must represent no action; meaning the continuation of present management and levels of use. Together, the alternatives present a range of reasonable management opportunities which address and, in part, resolve the resource management issues.

The goal of each alternative developed is the resolution of the issues. A variety of specific management actions addressing the individual issues was identified. These management prescriptions were then grouped according to general management themes. Current management of nonissue resources and programs will continue under all alternatives considered. The specific actions geared towards the resolution of the issues, along with the current management prescriptions for nonissue resources and programs, comprise the alternatives.

Four alternative management plans were developed and analyzed in detail. These alternatives are based on the management themes of: (1) no action, or continuation of present management; (2) **maximization of commodity resource production**; (3) **balance of multiple use**, and (4) the general protection of amenity resources.

Descriptions of the management themes, alternative-specific management actions, and management guidance common to all alternatives are presented in this chapter. A comparative summary of the projected impacts under each alternative is also provided.

ALTERNATIVES ELIMINATED FROM DETAILED STUDY

Several alternatives or portions of alternatives were considered during the formulation process but were dropped from detailed study. A brief description of the alternatives not considered in detail is provided below.

No Coal Areas Acceptable for Further Consideration for Coal Leasing

This alternative would have eliminated all of the 24 CSAs from further consideration for the leasing of federal coal. This alternative was eliminated from detailed study for four basic reasons:

- 1) Potential regional economic growth would be limited by prohibiting or obstructing the mining of coal in western North Dakota.
- 2) In some portions of the study area there are few or no significant conflicts occurring between the mining of coal and natural resources or social and economic structures.

3) National objectives of providing for reasonable and efficient energy production and achieving energy independence would not be met.

4) Federal laws and regulations would be violated by unnecessarily excluding areas of federal coal from potential leasing and development.

Disposal of All Public Lands in North Dakota

This alternative would classify all public lands for disposal. Disposals would, presumably, be accomplished through sales, Recreation and Public Purposes (R&PP) Act patents, and withdrawals to other federal agencies. This alternative was eliminated from detailed study for the following reasons:

1) Little management efficiency would be realized. Due to present policy, federal mineral estate would be retained. BLM mineral management responsibilities would remain for approximately 4.8 MM acres, including minerals within the jurisdiction of other Surface Management Agencies, requiring a continued BLM presence in the state.

2) Past public comment has identified the lack of publicly-owned lands available for recreational use as a resource management concern. Disposal of all public lands in the state would be contrary to public wishes.

3) Legal and regulatory statutes require the protection of such resources as critical habitats of endangered species, wetlands and riparian areas, significant cultural resources, etc. Disposal of all public lands in the state would be possible only if the continued protection of these resources could be ensured through restrictive patent covenants or by transferring lands to other resource management agencies.

Intensive Management of All Public Lands

This alternative would involve increased management activity and expenditures on the scattered tracts of public lands in North Dakota. Management actions would include increased trespass abatement, fencing of some tracts, signing, wildlife improvements, etc. This alternative was eliminated from further study for the following reasons:

1) Frequent visits to individual tracts would be necessary to implement and monitor management activities. The scattered land pattern results in excessive transportation and travel costs. In general, the small size and scattered pattern of tracts would also preclude any economies of scale for construction projects or other management activities.

2) The small size (average of about 44 acres) typical of the scattered tracts limits the potential for management. Intensive management of the small tracts may have little or no beneficial effect on resources of adjacent tracts. Investments on small tracts would produce little overall benefit to surrounding areas.

No Grazing

The alternative of no grazing has been eliminated from detailed study because it was considered in detail in the North Dakota Grazing EIS (USDI 1984a). Decisions resulting from the North Dakota Grazing EIS have been incorporated into this RMP as management guidance common to all alternatives.

Designation of Areas of Critical Environmental Concern

Nominations for three Areas of Critical Environmental Concern (ACECs) were received and evaluated. **All three tracts have outstanding resource values. However, ACEC designations will not be made because it is not the most effective way of achieving our management objectives.**

A brief analysis of each tract and the rationale for not making ACEC designations follows:

Pembina Gorge — This tract is part of the largest continuous woodland in North Dakota. It is characterized by dense oak forest, rare plant and animal species, and outstanding aesthetic values. However, because of its distance from the Dickinson District Office and because both the North Dakota Game and Fish Department (NDGFD) and the Parks and Recreation Department (NDPRD) already manage substantial acreage in the gorge, transfer of ownership, or at least management, to one of these agencies is most logical.

Douglas Alkali Wetland — This tract supports breeding piping plovers, a threatened species. However, many other BLM tracts support an equal or greater number of piping plovers. Management of these tracts must be decided on a case-by-case basis. **Because of its small size and distance from the Dickinson District Office**, this tract could be more efficiently managed by transfer of ownership or management to the U.S. Fish and Wildlife Service (USFWS), which has a wetland easement within one-fourth mile, or to NDGFD.

Westby Lake — This tract supports piping plovers, a California gull colony, rare plant species, and a number of native prairie bird species. **Because of its distance from the Dickinson District Office**, this tract could be better managed by the USFWS, which manages the land adjoining the north boundary and has personnel in the area.

The suggestions for transfer of ownership or management of these tracts are not meant to exclude other agencies or organizations from expressing an interest in them. However, BLM is committed to preserving the identified values and will only transfer responsibility to an entity dedicated to proper management. **These tracts, and others known to contain high resource values, are identified for special consideration during site-specific review of exchanges or disposals in Appendix D.**

MANAGEMENT GUIDANCE COMMON TO ALL ALTERNATIVES

The following management guidance constitutes a part of all alternatives considered in detail. Management guid-

ance common to all alternatives represents a combination of acceptable decisions from past planning efforts, management decisions that have been analyzed through program or project-specific environmental documents, and policy dealing with non-issue resources. Also included are decisions which are nondiscretionary or necessary to protect past investments. Minimum acceptable levels of commitment relating to the management of public lands and resources have been established for BLM in North Dakota through guidance issued by the Montana State Office. These management actions, title "Maintenance and Operations," are not reprinted in this plan but will be followed as management guidance common to all alternatives.

Air Quality

Potential impacts to air quality will be assessed in detail during the environmental analysis of specific management proposals such as coal activity planning, oil and gas permitting, etc. There are two management actions that may involve significant impacts to air quality: the permitting of federal oil and gas development, and the leasing (and presumed mining) of federal coal. Should analysis show the potential for any action to exceed the Ambient Air Quality Standards (AAQS) and the Prevention of Significant Deterioration (PSD) standards, the BLM will advise the proper regulatory agency, the North Dakota State Department of Health (NDSDH) **or the Three Affiliated Tribes, if on the Fort Berthold Reservation**, of this new source for their permit review.

The following specific stipulations for air quality and related safety aspects are listed as standard conditions of approval for all Applications for Permit to Drill (APDs) for oil and gas:

A gas analysis, which includes H₂S (hydrogen sulfide) content, must be made and submitted to this office within 3 months of completion of the well, and an updated analysis must be submitted annually thereafter. The analysis must also include an empirical calculation of SO₂ (sulfur dioxide) or actual analysis after flaring. A total volume of gas flared/vented/or used on-site must be included.

Flaring must be approved in writing by the BLM District Manager and be in compliance with all other provisions of Notice to Lessee-4A (NTL-4A) except as allowed in accordance with NTL-4A Part III(c).

Warning signs for H₂S must be placed at appropriate facilities.

Any unconfined gas, which exceeds 20 parts per million (ppm) H₂S gas, produced during testing or swabbing must be separated and flared. There must be a pilot light on all sour gas flares to ensure continuous ignition.

Proper breathing apparatus must be available and used when working in an H₂S environment exceeding 20 ppm.

A wind sock must be placed on the tank battery and must be visible from everywhere on the location.

Gas may be vented or flared during emergencies, well evaluation, or initial production tests for a time period of up to 30 days or the production of 50

million cubic feet (MMCF) of gas, whichever occurs first. After this period, approval from the authorized officer to flare or vent in accordance with NTL-4A must be obtained.

Should air quality data from research projects, specific environmental documents, or ongoing monitoring indicate unacceptable air quality resulting from flaring, newly completed oil and gas wells will be reviewed to determine the feasibility of hook-up to a gas gathering system. New oil and gas wells which cannot be included in a gas gathering system and must, therefore, continue to flare will be reviewed for compliance with the AAQSS. If air quality standards are being exceeded, mitigating measures such as air pollution control devices will be required and NDS DH will be notified.

Water and Soil Management

Water resource management on public lands will be in accordance with the objectives of multiple-use and will be coordinated with all other uses and objectives. BLM policy (BLM Manual 7200.04B9) is to protect, maintain, restore, and/or enhance the quality of water on all public lands so quality of the water will be maintained equal to, or above, legal standards (Clean Water Act of 1977, Standards of Water Quality for State of North Dakota). Specifically, water quality monitoring of land-use activities shall be performed to evaluate, maintain, protect or enhance water quality on, or passing through, public lands (FLPMA).

Executive Orders (11988 and 11990) and other directives mandate the Bureau to: (1) reduce the risk of floodloss, (2) minimize the risk on human safety, health and welfare, (3) preserve the natural and beneficial values served by floodplains, and (4) minimize the loss or degradation of wetlands when acquiring, managing, or disposing of public lands and facilities.

The Clean Water Act of 1977 requires the BLM to participate with state and other federal agencies in water quality planning, Section 208, to prevent degradation of water quality, and to implement Best Management Practices (BMPs) to the extent practical under the National Nonpoint Source Policy. Because sediment is by far the largest single nonpoint source pollutant derived from public lands in North Dakota, the BLM's approach to BMPs for sediment reduction will meet multiple-use objectives while still providing an acceptable level of water quality protection.

The BLM will develop new sources of water on public lands especially in the Big Gumbo Area. Methods that will be used include snow management, pothole blasting, reservoir excavation, etc.

We will maintain or enhance drainage stability. Headcuts will receive the focus of attention.

Ground water will be managed to maintain the integrity of aquifer systems both in quantity and quality.

Soils of the public lands will be managed to maintain productivity and promote sustained yields while keeping erosion at minimal/acceptable levels and preventing physical or chemical degradation.

Proposed surface-disturbing projects will be analyzed to determine suitability of soils to support or sustain such projects. They will be designed to minimize soil loss. Bureau management actions and

objectives will be consistent with soil resource capabilities.

Minerals

Application of Coal Screens

The federal coal planning process (**Appendix A to this document**) involves the use of four screens during the development of land use plans: (1) the identification of areas with coal development potential, (2) the application of twenty criteria to identify areas unsuitable for surface mining, (3) multiple-use tradeoff decisions, and (4) consultation with surface owners to determine opposition to surface mining of federal coal. Three of these screens, coal development potential, unsuitability criteria, and surface owner consultation are not subject to alternative methods of application. The application of these three screens is the same for all alternatives. However, alternatives have been developed for the multiple-use tradeoff screen. The specific factors involved in the application of all four coal screens are presented in **Appendix B to this document**.

The identification of areas with coal development potential was based on information obtained from U.S. Geological Survey (USGS) exploration drilling and information provided by industry. Identified areas are based only on available coal resource information and may not represent the absolute boundaries of the coal resource.

The 20 unsuitability criteria, and corresponding exemptions and exceptions, were applied to all areas with identified coal development potential. In Alternative A, nine of the criteria were found to apply. Eight of the criteria applied in Alternatives B, C, and D. The application of the unsuitability criteria is presented in **Appendix B to this document**.

Consultation with qualified surface owners to identify their preferences towards the surface mining of coal was conducted for all areas having potential for coal development except for those portions of the CSAs that were excluded from consideration early in the process due to obvious multiple use conflicts. Areas of significant surface owner opposition were excluded from further consideration. The methods used to consult with qualified surface owners and the results of consultation are presented in **Appendix B to this document**.

Specific coal lease areas will be analyzed in detail during activity level planning or in response to applications for lease. Documentation of NEPA compliance will be completed for all tracts prior to lease offering. Cumulative impacts of coal leasing and subsequent mining will also be addressed at this stage. At the time of site-specific analysis resources such as air quality and cultural resources, which could not be analyzed in detail during land use planning, will be fully assessed.

Other Coal Management Actions

Other coal management actions such as review and approval of exploration plans (43 CFR 3482 and 3484) and the processing of emergency leases (43 CFR 3425.1-4) will be conducted in response to applications in accordance with the appropriate coal management regulations.

Oil and Gas

The oil and gas leasing program will be administered by the BLM Montana State Office (MSO). All areas to be

leased that fall within identified resource concern areas (**Map K-1 of the Draft**) will be forwarded to the Dickinson District Office for the determination of appropriate stipulations (**Appendix C to this document**). Lease applications for locations outside of resource concern areas would be reviewed and processed entirely by the state office.

Responsibilities of the BLM and U.S. Forest Service will remain the same as provided for in the 1984 BLM/USFS MOU for oil and gas operations within the administrative boundary of the Little Missouri National Grasslands.

APDs and Sundry Notices received will be processed according to the terms and stipulations of the lease. Additional stipulations required to protect sensitive resources or human health may be added as conditions of approval of the APD. All APDs and Sundry Notices will be analyzed in accordance with NEPA and corresponding regulations of the Council on Environmental Quality. **Appendix P of the Draft** provides a description of APD processing procedures.

Priority for inspection of wells is determined by levels of production, past lease compliance records and health and safety considerations. Priority wells are reviewed for violations of health and safety requirements, environmental protection, and possible royalty loss due to operator negligence in construction of production facilities or reporting of produced/sold hydrocarbons. Operations violating lease stipulations and the conditions of approval stated in the APD are issued either Incidence of Noncompliance statements or written orders to correct noncompliance. Fines and recommendations for back payments of federal royalties are imposed at this time.

The potential for drainage of federal hydrocarbons will be assessed. If a case of drainage is suspected, the lessee of the offended tract will be notified. Following a complete review of reservoir information, a determination of "no drainage" or a demand to protect the federal minerals is made. Minerals could be protected through the development of a protective well, the payment of compensatory royalties, the development of Communitization Agreements, or the recommendation for, and subsequent commitment of, the offending lands to a Participating Area or Unit Agreement. If the affected minerals are not leased the BLM MSO will offer the tract for lease with a stipulation addressing the drainage and necessary protection.

Other Minerals

Applications for saleable minerals (sand, gravel, scoria, etc.) will continue to be processed as received. Individual applications will be reviewed through the NEPA process. Activities will be monitored and cases of unauthorized use will be resolved.

Lease applications for sodium and potassium will be processed as received. Site specific decisions regarding lease issuance will be based on an interdisciplinary review of each proposal. These leases and related activities will be regulated by 43 CFR 3500.

All public lands, **excluding acquired minerals**, are open to mineral entry for locatable minerals except where withdrawn to protect resource values and uses. Mining activities will be regulated under 43 CFR 3809 to prevent **unnecessary** and undue degradation of surface resources and to ensure reasonable reclamation of disturbed sites. **Acquired minerals are subject to leasing under 43 CFR 3500.**

Range and Vegetation Management

Range and vegetation management for BLM lands in North Dakota were analyzed in detail in the North Dakota Grazing EIS (USDI 1984a).

All of the allotments in the district were reviewed for placement in one of three categories: Maintain (M), Improve (I), Custodial (C). "M" category allotments have a satisfactory range condition, high production potential and are nearing the potential, no serious resource conflicts, opportunities for a return on public investments and are being properly managed. "I" category allotments have an unsatisfactory range condition, a moderate to high production potential and are producing at low to moderate levels, serious resource conflicts, opportunities for a return on public investments and appear to be improperly managed. "C" category allotments are those on which range condition is not a factor, have low production potential and are producing near the potential, limited resource conflicts, have no opportunities for a return on public investments or opportunities which are constrained by technological or economic factors and are under satisfactory management.

Three allotments, addressed in Allotment Management Plans (AMPs), are in the "M" category. There are no allotments in the "I" category. The remaining 94 allotments are in the "C" category.

Management decisions for range and vegetation were presented in a Record of Decision issued March 1985 (USDI 1985c). Those decisions are carried forward in this land use plan.

- 1) **Selection of the Rangeland Improvement Alternative.**
- 2) Continue authorized livestock use at current levels for all allotments. Authorized use for allotments will adhere to the AMP. Custodial allotments could be leased year long, however season of use would be determined by use of the adjoining private range.
- 3) Maintenance category allotments will receive priority over Custodial category allotments for actions including monitoring, evaluation, and range improvements.
- 4) The BLM will join in a cooperative effort to control leafy spurge on approximately eight allotments in McHenry County. The BLM will participate where control is taking place on adjoining private lands.



5) Lease renewals and transfers for lands identified for disposal will be for two years or less, and unleased lands suitable for grazing will be leased using nonrenewable grazing leases.

6) The range improvement program will be directed towards AMP allotments and allotments needing leafy spurge control. Any new projects will be analyzed for efficiency and feasibility based on resource needs, benefit-cost ratio, and user participation.

7) Monitoring will be done to determine if management objectives are being met, what changes are taking place, what adjustments are needed, and to ensure protection of the vegetation, wildlife habitat, and watershed. Minimum monitoring requirements for AMP allotments will include annual assessment of actual use, utilization, and climate; and periodic range condition and trend transects as determined by the District monitoring plan. Approximately 20 percent of the custodial allotments and all the AMPs will be inspected each year. Minimum monitoring will include taking photos, estimating range condition, trend, and utilization, and identifying unauthorized uses.

In addition to the decisions following the North Dakota Grazing EIS, several management policies towards riparian vegetation will continue under all alternatives. Activity plans will be developed as needed **for the protection or enhancement of riparian vegetation** under all alternatives. Monitoring of riparian areas to measure accomplishment of management objectives would take place under all alternatives.

AMPs or coordinated resource activity plans may be developed on areas acquired through land base adjustments.

Wildlife Habitat Management

Wildlife habitat on public lands will be managed under the following general objectives: (1) to maintain or improve all manageable wetland or riparian habitats presently in satisfactory condition, (2) to improve all manageable wetland or riparian habitats presently in unsatisfactory condition, (3) to maintain or improve breeding habitat and/or nest sites for threatened or endangered species and migratory birds of high federal interest, (4) to improve nesting and winter habitat for Sage Grouse, and (5) to maintain or improve habitat for big game, especially antelope, elk, and bighorn sheep.

Habitat condition goals and specific management or habitat improvement projects will be developed as necessary. Wildlife habitat management prescriptions will be part of coordinated resource management plans (CRMP) or other activity plans whether initiated by wildlife, range, watershed, or other resources. The need for wildlife habitat management prescriptions is currently foreseen for pronghorn and sage grouse in Big Gumbo area and for elk in the Lost Bridge area. Plans will be developed for these species when inventory of seasonal use areas is more complete. Plans will be developed in cooperation with the NDGFD and USFWS when appropriate.

All activity plans will include a review of the latest information available on rare plant and animal populations, exemplary natural communities, and areas designated under the state natural area registry program. The scope and significance of these

resource values will be evaluated in conjunction with NDGFD and NDPRD. Emphasis will be placed on protecting these sites from adverse impacts.

The goal of the Dickinson District's riparian habitat management program (HMP) is to have management plans implemented on all manageable riparian areas by the year 2001. An extensive inventory of riparian habitat was completed in 1986. A list of tracts known or suspected to have riparian habitat is available in the Dickinson District Office.

These tracts will be prioritized and then evaluated for ecological condition, potential, and suitability for management by 1995. Those lands that are not manageable by BLM due to small size or distant locations may be transferred to another federal agency, managed by a state agency under a cooperative management agreement, exchanged for similar, more manageable, habitat, or sold. The dispose/retain classifications in **Appendix D of this document** may be changed as a result of the evaluations.

Where land use or activity plans are currently in place, such as AMPs in the Big Gumbo area, plans will be adjusted as necessary to ensure that adequate quantifiable riparian objectives are present. All new plans will include such objectives where applicable.

All rights-of-way, leases, and permits will have the following stipulation under the preferred alternative where applicable:

No disturbance of riparian vegetation will be allowed except for essential road and utility crossings. Construction and rehabilitation in riparian areas will conform to the provisions of BLM Manual Handbook H-2801-1, Right-of-Way Plans of Development and Grants.

Cooperative management agreements with resource management agencies or special interest groups concerned with habitat management will be pursued when high importance habitats which cannot be intensively managed or fully protected by the BLM are encountered. Cooperative agreements will establish the management objectives and roles and responsibilities of the BLM and cooperating agency or group.

No Surface Occupancy would be allowed on federally-designated natural areas, state-dedicated nature preserves, or state-managed natural areas. Monitoring of riparian, **threatened and endangered species**, and other wildlife habitats on public lands will continue to assess management effectiveness, need for the development of activity plans, and general trend of habitat condition.

All future management actions will be subject to the requirements of the Endangered Species Act (1973, as amended) on a case-by-case basis.

Lands and Realty

Unauthorized uses of public land will be resolved either through termination, cooperative agreement authorized by the Sikes Act, authorization by lease or permit, **issuance of a right-of-way**, exchange (including exchange with the State) or sale.

New cases of unauthorized use will be resolved immediately. Permits may be issued to provide short-term

authorization, unless the situation warrants immediate cessation of the use and restoration of the land. Highest priority will be given to abatement of the following unauthorized uses: (1) new unauthorized activities or uses where prompt action can minimize damage to public resources and associated costs, (2) cases where delay may be detrimental to authorized users, (3) cases involving special areas, sensitive ecosystems, and resources of national significance, (4) cases involving malicious or criminal activities, and (5) unauthorized landfills and dumpsites where there is a potential for hazardous waste dumping.

Trespass agricultural use of public lands will be authorized in the following situations: (1) until disposition or reclamation of the land has occurred, (2) where the acreage is small, causes low impact and is incidental to similar uses on adjacent land, and (3) where agricultural use will benefit public values. In light of these criteria public land with agricultural potential (small, scattered parcels) will be considered for agricultural use on a case-by-case basis.

Patents for Color-of-Title or other entry will be issued when appropriate. Other title resolution cases, e.g., disclaimers of interest and right-of-way abandonments, will be processed. **R&PP applications will be assessed on a case-by-case basis. All public lands in the state are open to R&PP applications except withdrawn land and land acquired for specific purposes.**

The North Dakota Public Service Commission (NDPSC) has siting authority for energy conversion facilities and major transmission lines in the state. The District will present concerns addressing potential impacts of siting on important public land and mineral resources at all opportunities afforded by the NDPSC. Concerns will also be presented at all opportunities to the North Dakota Transportation Division during their review of proposed railroad abandonments.

Provisions of Title V of FLPMA guide corridor and facility siting on public lands. Location of the rights-of-way for the types of facilities addressed in the North Dakota Energy Conversion and Transmission Siting Act will be assessed using the corridor and route criteria set forth in the Act in addition to considering other resource values and uses BLM considers to be important to the public. Right-of-way applications will be considered on a case-by-case basis. Areas containing resources or uses that would be impacted and difficult or impossible to mitigate will be avoided unless it is shown there is no reasonable alternative. These areas include:

- 1) Areas having potential for recreational development,
- 2) Environmentally sensitive areas such as crucial wildlife habitats, wetlands, slump areas, and extensive wooded areas,
- 3) Areas containing significant archaeological, historical, or paleontological values,
- 4) Areas with specific visual objectives (e.g., adjacent to established parks, adjacent to the Little Missouri Scenic River), and
- 5) Areas with high potential for coal mining.

Future facilities will be located within or adjacent to existing rights-of-way when possible and when environmental conditions permit. The designation of utility corridors across public land is not practical because of the relatively

small areas of control or influence designation would have. Official corridors will be established if changes in conditions such as public land pattern or right-of-way uses warrant.

Other legitimate uses of public land may be authorized on a case-by-case basis by permits, leases, and easements.

Patents may contain easements which assure access for use of public land, by the public. An easement may be used to preserve important resources such as archaeological sites, historical sites, **scenic areas**, or habitat of **wildlife** species on public and adjacent private land if it is determined to be in the public interest.

Private exchange and exchange pooling are preferred to sales as methods of **land ownership adjustment**. The mineral estate will be exchanged with the surface estate if the land does not contain known minerals. Sales of public land may take place under the criteria presented in Section 203 of FLPMA and the criteria identified through the land use plan. Sale of the mineral estate will take place as provided for in Section 209 of FLPMA. Sanitary landfill sites will be considered for sale to present lessees. Should the need arise, public land will be considered on a case-by-case basis for exchange or sale for solid and hazardous waste disposal/transfer.

Only federal coal determined to be acceptable for further consideration for leasing will be considered for coal exchanges. Federal coal considered for exchange will be located in the same state as the coal offered in exchange by a proponent. Exchange of other minerals (leasable and salable) will be considered on a case-by-case basis.

North Dakota is not included under the withdrawal review **timeframe** requirements of **Section 204(L) of FLPMA**; therefore, the District does not receive funding to conduct withdrawal review on a portion of the approximately 330,800 acres of withdrawn lands (**Appendix J of the Draft**). There is a need for withdrawal review because some may no longer be needed or may not be fulfilling the intended purpose of the withdrawal. **Withdrawals will be reviewed to determine whether, and for how long, the withdrawal would be consistent with the objectives of the programs for which the lands were withdrawn and for consistency with other relevant programs. Withdrawals not needed should be revoked and the jurisdiction of the land returned to the BLM. Some of the specific uses could be authorized by issuing rights-of-way to or by entering into cooperative agreements with other federal agencies instead of withdrawing the land from the public land base.**

Approximately 8,000 acres were classified under the Classification and Multiple Use Act (C&MU; Appendix J of the draft). These classifications were terminated previous to this plan. However, as a result of Civil Action No. 85-2238, the BLM has been enjoined from taking any actions inconsistent with the original classifications. Final actions involving these tracts are pending resolution of the court case. Preliminary categorizations for the disposal or retention of these tracts are presented in Appendix D to this document.

The management of lands and minerals returned to BLM administration through withdrawal revocation or **R&PP patent reversions, acquired through gifts or exchanges** will be guided by the objectives, resource allo-

cations and decisions given in this plan. Disposal of lands returned to BLM administration through withdrawal review and R&PP patent reversions will be addressed on a case-by-case basis.

A transportation plan portraying the existing situation will be maintained. The plan will include legal access provided by section lines, will address consolidated areas as the need arises and will illustrate ORV designations. It will identify the disposition of main and spur roads in oil and gas areas as development diminishes in intensity and size.

Access easements will be acquired where legal/physical access is lengthy or arduous and a need has been demonstrated.

Construction of new roads and reconstruction of all or portions of existing roads will be in a manner minimizing surface disturbance. There will be a limit of one main road to each facility. Even distribution of year around access will be sought while minimizing networks of interconnecting roads. Guidelines and stipulations given in leases and other authorizations, "Surface Operating Standards for Oil and Gas Exploration and Development" and BLM Manual Handbook H-2801-1 will be followed.

Recreation and Visual Resources

The public lands in North Dakota will be managed as an extensive recreation management area for dispersed, non-developed activities, e.g., hunting or trail activities. Management of public lands will identify potential recreational opportunities and protect them where practical. Due to the relative size and consolidated land pattern, recreation management will be emphasized in the Big Gumbo area.

Visual resources will continue to be evaluated as a part of activity planning and environmental analysis. The protection of the high visual qualities of the National Park Service units (Theodore Roosevelt National Park, Fort Union Historic Site, Knife River Indian Villages) will be considered, in cooperation with Park Service officials, when a specific mineral lease or development action potentially affecting the existing visual qualities is proposed.

Blocks of public land will be signed to identify public access. When possible, directional and informational signs will be installed along public roads providing access to blocked areas of public land. Signing will be done in cooperation with the proper state and county highway departments. All signs will be maintained annually.

Based on present demand, public land will be signed to improve access to hunting, fishing, hiking, and other dispersed activities. If, in the future, public demand requires more intensive recreational facilities, such as campgrounds, activity plans will be developed to meet the demand. As a guide, recommendations contained within the 1985 Statewide Comprehensive Outdoor Recreation Plan (SCORP) will be used in meeting the specific recreational needs of the public on public lands.

BLM actions that potentially affect the present character of stream segments listed on the Nationwide Rivers Inventory (NRI) will be avoided or otherwise mitigated. NRI stream segments located in

the planning area include parts of: (1) Pembina River (2) Missouri River and, (3) Little Missouri River. If proposed actions cannot be avoided or adequately mitigated, consultation will be initiated between the BLM and the NPS.

Cultural Resources

Cultural resources in the district will be managed under the goals of: (1) protecting and preserving representative samples of the full array of cultural resources to the benefit of scientific and socio-cultural use by present and future generations, (2) ensuring cultural resources are given full consideration in all land use planning and management decisions, (3) managing cultural resources so scientific and socio-cultural values are not diminished, but rather maintained and enhanced, and (4) ensuring the Bureau's undertakings avoid inadvertent damage to cultural resources, both federal and nonfederal.

All BLM actions which may potentially affect cultural resources must comply with the National Historic Preservation Act of 1966 as amended and as implemented by 36 CFR 800. This legislation and regulation (called the Section 106 process) is initiated when a specific federal action (e.g., decisions made during Activity planning, issuance of a permit/license, range improvement or the transfer/sale of federal property) could result in changes in the character of a cultural property. The process is briefly described below (see the National Historic Preservation Act of 1966 as amended and 36 CFR 800 for a complete description of the process).



Prior to any federal undertaking, cultural resources eligible to or listed on the National Register of Historic Places (NRHP) must be identified. Cultural resources identified within the project area and potentially affected by a BLM action are evaluated in consultation with the State Historic Preservation Officer (SHPO). Agreement between the agency and SHPO on eligibility constitutes consensus, permitting the compliance process to proceed. Once consensus exists, the nature of the effect on historic properties is determined. One of the three following determinations are made: (1) No effect — the agency, in consultation with SHPO, determines the federal undertaking will not impact eligible cultural resources. (2) No adverse effect — the agency in consultation with the SHPO determines there will be an effect but the effect will not be adverse. The agency submits to the Advisory Council on Historic Preservation (ACHP) a report which describes the nature of the undertaking and a justification for a determination of no adverse effect. The ACHP may concur, object with conditions (project may proceed if conditions are met) or object (in this case a consultation process is initiated among ACHP, the agency and SHPO). (3) Adverse effect — when the agency determines the effect on cultural resources will be adverse, the agency, SHPO, and the ACHP consider ways to avoid or mitigate the impact of the federal undertaking on cultural resources. Measures considered during consultation may include preservation of the cultural resource, restoration (restoring, repairing) of the cultural resource, documentation (photographs, drawings, and histories of buildings and structures), reducing the magnitude of the undertaking, redesigning the project, and data recovery (refers to archaeological sites where data may be recovered through controlled excavation). **In cases where the cultural resources are so unique and significant, extraordinary measures would be taken to preserve those resources.** Once the consulting parties agree on the measures to avoid or mitigate the impact to eligible cultural resources by the federal undertaking, and the conditions or stipulations have been met, the project may proceed.

Mitigation or avoidance of adverse effects to eligible cultural resources may not be possible in all cases. Further, if the federal undertaking is of great public benefit, in relation to the significance of the cultural resources, damage to or destruction of cultural resources may be considered an acceptable loss. **Even under these conditions the ACHP must be given the opportunity to comment on the proposed undertaking.**

If a historic property is discovered during the course of a project that was not previously identified, the **operator/lessee** must contact the BLM. If the cultural resource is determined to be eligible through consultation with the SHPO, the agency is directed, by the Archaeological and Historic Preservation Act of 1974, to notify the Secretary of Interior, in writing, describing the project and the nature of the cultural resource. The agency may request the Secretary to undertake or fund the recovery, protection, and preservation of the data, or it may request the developer to hire qualified cultural resource specialists to undertake such activities. The Secretary determines if the significance of the resource, the effect on the resource by the project, and any proposed mitigation warrants ACHP consideration. In most cases, however, once the cultural resource has been determined eligible, the agency usually will proceed with Section 106 review.

All persons conducting cultural resource fieldwork on public lands in the District are required to obtain a Cultural

Resource Use Permit from the MSO in Billings. These permits are granted under the authority of the Archaeological Resources Protection Act of 1979 (ARPA), FLPMA, Antiquities Act of 1906, and 43 CFR Parts 3, 4, 7, and 2920.

District Managers are responsible for authorizing and monitoring specific field work proposed and conducted under any cultural resources use permit. This is accomplished by the permittee submitting a Fieldwork Authorization request to the District Manager. Once approved the permittee may proceed with the fieldwork.

Activity plans may be developed for significant cultural resources located on public lands. Consideration of cultural resources will also be included in other activity plans such as AMPs or CRMPs.

Paleontological Resources

The Antiquities Act of 1906 extends protection to paleontological resources of significant scientific interest. This Act authorizes the Bureau (in this case, the MSO of the BLM) to issue permits to qualified paleontologists to conduct work on public lands. Currently, the authority is limited to vertebrate fossils, but if significant invertebrate or plant fossils are located on public land the authority could be extended to cover those resources.

The need for pre-project inventories for paleontological resources will be considered on a case-by-case basis. Personnel used to conduct pre-project inventories must meet Bureau permit standards. The Bureau will evaluate the significance and treatment of reported resources in consultation with North Dakota Geological Survey through the State Historic Preservation Officer. If paleontological resources are discovered during construction, the operator/lessee must report these findings to the BLM. A subsequent evaluation and management decision will be made concerning reported and discovered resources. Management plans may then be formulated to protect resources of scientific interest.

Fire Management

Wildfires on public lands will be controlled. Cooperative agreements with county governments for the control of fires on public lands will be established. Permittees, lessees, and contractors will be required to control fires on public land included in their operations.

Prescribed burn plans and assessments will be prepared as needed for vegetation manipulation and made available to county governments, permittees, and adjacent landowners for review.

Areas of Critical Environmental Concern

There have been no ACECs identified on public lands in the District. If areas of public land containing critical resource values are identified, each area will be reviewed in coordination with appropriate state or federal agencies to determine levels of protection necessary. ACEC designation will be made when critical resource values cannot be protected through other management actions.

ALTERNATIVES CONSIDERED IN DETAIL

Four alternatives were considered in detail. These alternatives were based on the general themes of no action or continuation of present management (Alternative A), maximization of commodity resource production (Alternative B), a balance of multiple uses (Alternative C), and protection of amenity resources (Alternative D). Each of the four alternatives, in combination with Management Guidance Common to All Alternatives, represents a comprehensive plan for managing public lands and minerals in North Dakota. Table 2-1 presents a summary of the major resource allocations and management actions under each alternative.

ALTERNATIVE A – NO ACTION OR CONTINUATION OF PRESENT MANAGEMENT

This alternative would continue present management in accordance with the four existing MFPs, decisions based on the North Dakota Grazing EIS, North Dakota Oil and Gas EA, other programmatic environmental documents, and present BLM policy and management direction.

Coal Leasing

A total of 607,131 acres located in 18 CSAs were identified as having coal development potential. The 18 CSAs contain an estimated 12,168 MM tons of minable federal coal. Application of the unsuitability criteria eliminated 151,568 acres from further study. An additional 45,272 acres were dropped from further consideration under the application of the multiple use screen. A total of 1,559 landowners were consulted regarding their preference towards surface mining of federal coal. The surface owner consultation screen dropped 19,112 acres from further consideration due to significant surface owner opposition to mining. (**Appendix B to this document**).

The application of the four coal screens resulted in a total of 215,952 acres, containing an estimated 4512 MM tons of minable federal coal, being excluded from further consideration. A total of 391,179 acres of federal coal (7656 MM tons) would be acceptable for further consideration during activity planning, response to application, or for exchange. After the application of all screens, 13 CSAs contain sufficient federal coal tonnage to support a typical new mine and facility.

Multiple-use tradeoffs excluded from further consideration include concentrations of slopes exceeding 30 percent, buffer zones for lakes, wildlife refuge watersheds, experiment stations, municipal watersheds, and buried valley aquifers, the A.C. Townley Homestead, and major oil and gas fields (**Appendix B to this document**).

Portions of the eligible Knife River Flint Quarry National Register District were excluded under a separate decision made by the Secretary of Interior.

Land Pattern Adjustment

A total of 9,539 acres located in the Southwest, McKenzie-Williams and West-Central North Dakota MFP areas were identified for disposal. Land pattern review criteria are presented in **Appendix D to this document**. The theme of this alternative is to continue the present practice of retaining manageable areas with high resource values, broad multiple-use values, or potential for further consolidation through acquisition of adjacent lands.

The primary method of disposal would be through exchange. Target areas for exchange would be adjacent to the Big Gumbo and Lost Bridge areas and contiguous to high resource value retention tracts. Lands identified for disposal would also be available for transfer to other federal agencies, R&PP Act patents, and sales.

Oil and Gas Leasing

Special lease review areas or stipulations would be established for approximately 29,136 acres of federal oil and gas. A review area and stipulations would be used, when necessary to protect nesting Golden Eagles on 28,040 acres. Special lease stipulations would be used in addition to Montana BLM Standard Stipulations. No Surface Occupancy would be applied to 1,096 acres to protect floodplains, native prairie, and wetlands. The remaining 431,258 acres of federal oil and gas located under **federal, state, or private** surface would fall under Montana BLM standard lease stipulations.

Much of the federal oil and gas considered in this plan is presently under lease. Should these leases expire or otherwise terminate, parcels falling within the identified special review areas will be analyzed in greater detail to determine the need for the special stipulations presented in **Appendix C to this document**. No new stipulations will be placed on existing leases.

The following tabulation shows the general categories of stipulations that would be added to leases and acreages of federal oil and gas affected.

Stipulation Category	Low or No Oil/Gas Potential	Moderate Oil/Gas Potential	High Oil/Gas Potential	Unknown Oil/Gas Potential	Total
	(acres)	(acres)	(acres)	(acres)	(acres)
Open	— ¹	— ¹	— ¹	— ¹	431,258
Open with no surface occupancy or seasonal restrictions	0		28,040	1,096	29,136
Closed	0	0	0	0	0

¹ Acreage not available by category.

Off-Road Vehicle Use Designations

Previous MFP decisions did not designate public lands as open or closed. Under existing management, however, all public land is open to ORV use. Emergency closures may be made when necessary.

TABLE 2-1
SUMMARY OF ALTERNATIVES

ISSUE	MANAGEMENT OBJECTIVES	RESOURCE ALLOCATIONS AND MANAGEMENT ACTIONS			
		Alternative A	Alternative B	Alternative C	Alternative D
Coal Leasing	To encourage orderly development of the federal coal resource while avoiding unnecessary impacts to other resources and land uses	391,179 acres are acceptable for further consideration for the leasing or exchange of coal	599,496 acres are acceptable for further consideration for the leasing or exchange of coal 152,487 acres included in the area acceptable with special stipulations	573,868 acres are acceptable for further consideration for the leasing or exchange of coal 198,923 acres included in the area acceptable with special stipulations	487,072 acres are acceptable for further consideration for the leasing or exchange of coal 143,725 acres included in the area acceptable with special stipulations
Land Pattern Adjustment	To achieve a land pattern which allows efficient management of multiple uses, and ensures adequate protection of important resource values	9,539 acres identified for disposal or exchange Preferred acquisition areas are lands adjacent to the Big Gumbo and Lost Bridge areas	38,680 acres identified for disposal or exchange Exchanges would be made to acquire lands adjacent to the Big Gumbo and Lost Bridge areas	22,739 acres identified for disposal or exchange 11,715 acres identified for exchange only Exchanges would be made to acquire lands within the Big Gumbo and Lost Bridge consolidation areas and lands adjacent to isolated retention tracts when manageability or resource values can be enhanced	No public lands would be offered for exchange or disposal Outside applications would be reviewed on a case-by-case basis
Oil and Gas Leasing	To encourage development of the federal oil and gas resource while avoiding unnecessary impacts to other resources and land uses	Special lease stipulations applied to all new leases on 29,136 acres All future leases on the remaining 431,258 acres will include Montana BLM Standard Stipulations	Future leases on 460,394 acres will include Montana BLM Standard Stipulations only	Special lease stipulations applied to all new leases on 206,811 acres All future leases on the remaining 253,583 acres will include Montana BLM Standard Stipulations	Special lease stipulations applied to all new leases on 107,314 acres All future leases on the remaining 253,583 acres will include Montana BLM Standard Stipulations There would be no future leasing on 99,497 acres
Off-Road Vehicle Use Designations	To provide sufficient off-road recreation opportunities while preventing unnecessary impacts to other resources	No off-road vehicle use designations; all areas open to use	All areas designated open to off-road vehicle use	22,164 acres in the Big Gumbo area limited to maintained roads March 1 through June 1; open to off-road vehicle use remainder of year All other lands designated open to off-road vehicle use	22,164 acres in the Big Gumbo area limited to maintained roads March 1 through June 1; limited to roads and trails remainder of year All other lands designated open to off-road vehicle use

ALTERNATIVE B

This alternative is based on the themes of maximizing commodity resource production, consolidating land pattern to improve management efficiency and maximizing opportunities for ORV travel and recreation.

Coal Leasing

A total of 1,009,648 acres located in 24 CSAs were identified as having coal development potential. The 24 CSAs contain an estimated 17,750 MM tons of minable federal coal. Application of the unsuitability criteria eliminated 193,382 acres from further study. An additional **127,153** acres were dropped from further consideration under the application of the multiple-use screen. A total of 3,403 landowners were consulted regarding their preference towards surface mining of federal coal. The surface owner consultation screen dropped **89,617** acres from further consideration due to significant surface owner opposition to mining. (**Appendix B to this document**).

The application of the four coal screens resulted in **410,152** acres, containing an estimated **6,720** MM tons of minable federal coal, being excluded from further consideration. Under this alternative **599,496** acres of federal coal (**11,030** MM tons) would be acceptable for further consideration during activity planning and/or response to application. Of this, **152,487** acres would be acceptable with special stipulations (**Appendix B to this document**). Sixteen CSAs contain federal coal of sufficient tonnage to support a typical new mine and facility after the application of all coal screens.

Areas excluded from consideration due to multiple use conflicts include: regionally or nationally important cultural resources, major oil and gas fields, major utility and transportation facilities, intensive public use or development areas, and areas exceeding the established threshold of regionally significant wildlife habitats (**Appendix B to this document**).

Land Pattern Adjustment

A total of **38,680** acres would be open for consideration for repositioning subject to a case-by-case assessment to determine if there are any resources or other factors present that would preclude disposal. Land pattern review criteria are presented in **Appendix D to this document**. All public lands **not located** in proximity to the Big Gumbo and Lost Bridge areas would be available for disposal (Maps 2-1 and 2-2). Land ownership in those areas would be consolidated to improve manageability and enhance existing resource values.

The primary means of disposal would be through exchange for lands contiguous to the Big Gumbo or Lost Bridge areas. Tracts falling outside of the two consolidated blocks containing moderate to high resource values would be available for transfer to other federal agencies that, due to proximity, budget, or management policy, would be better able to manage the tracts. When exchange or transfer is not feasible, the tracts would be available for sale, R&PP patent, or other means of disposal.

Private groups or state agencies able to manage and preserve special resource values could be identified as designated bidders in circumstances where unmanageable

tracts contain high resource values and private groups or agencies have expressed interest.

Protective covenants in patents would be used as a last resort when necessary to protect high value resources located on unmanageable tracts offered for disposal. However, protective covenants would be the least desirable method of preserving resource values. Additionally, protective covenants would only be employed when they contain wording consistent with county zoning or state law; thereby compliance/enforcement would be provided by local government officials.

Oil and Gas Leasing

No special lease review areas or lease stipulations would be designated. Future leases on any of the 460,394 acres of federal oil and gas considered in this plan would be issued under the Montana BLM standard lease stipulations (**Appendix C to this document**).

Off-Road Vehicle Use Designations

All **67,571** acres of public lands would be designated as open for ORV use. No special use restrictions would be identified. No ORV travel restrictions would be imposed on authorized actions such as mineral development, or livestock grazing. Emergency closures may be made when necessary.

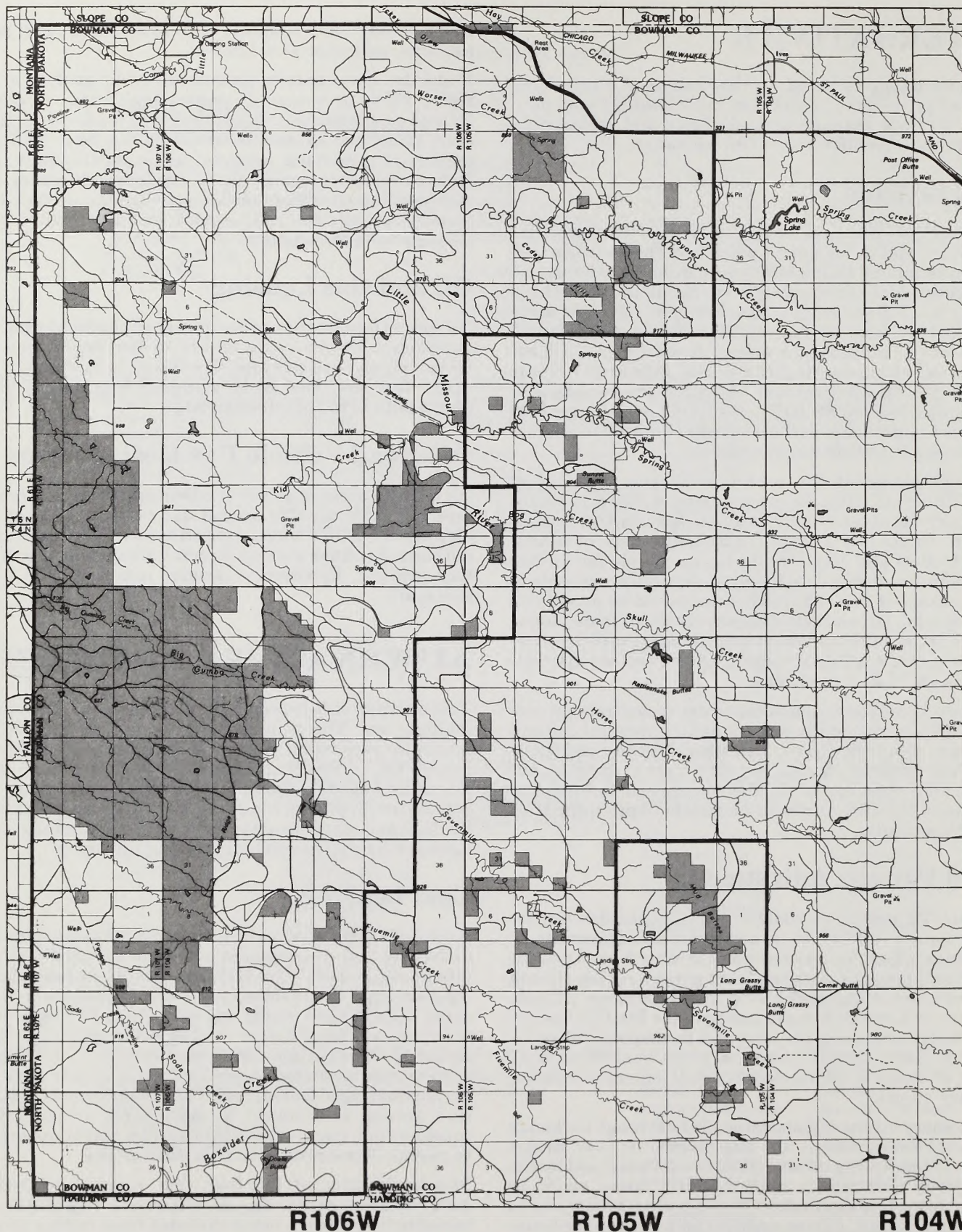
ALTERNATIVE C – PROPOSED

This alternative is based on the general theme of balanced multiple use. The management actions are intended to maximize production of mineral resources and opportunities for ORV recreation, and to consolidate surface lands into a manageable pattern. Along with these goals, all actions are to protect high resource values as determined by BLM and other state and federal resource management agencies, as well as meet all legal requirements.

Coal Leasing

A total of 1,009,648 acres located in 24 CSAs was identified as having coal development potential. The 24 CSAs contain an estimated 17,750 MM tons of minable federal coal. Application of the unsuitability criteria eliminated 193,382 acres from further study. An additional **154,555** acres were dropped from further consideration under the application of the multiple-use screen. A total of 3,403 landowners were consulted regarding their preference towards surface mining of federal coal. The surface owner consultation screen eliminated **87,843** acres from further consideration due to significant surface owner opposition to mining (**Appendix B to this document**).

The application of the four coal screens resulted in **435,780** acres, containing an estimated **7,159** MM tons of minable federal coal, being excluded from further consideration. Under this alternative, **573,868** acres of federal coal (**10,591** MM tons) would be acceptable for further consideration during activity planning, response to application, or for exchange. Of this, **198,923** acres would be acceptable with special stipulations **for the protection of vegetation, buried-valley aquifers, and National**



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R106W

R105W

R104W

Big Gumbo and Vicinity

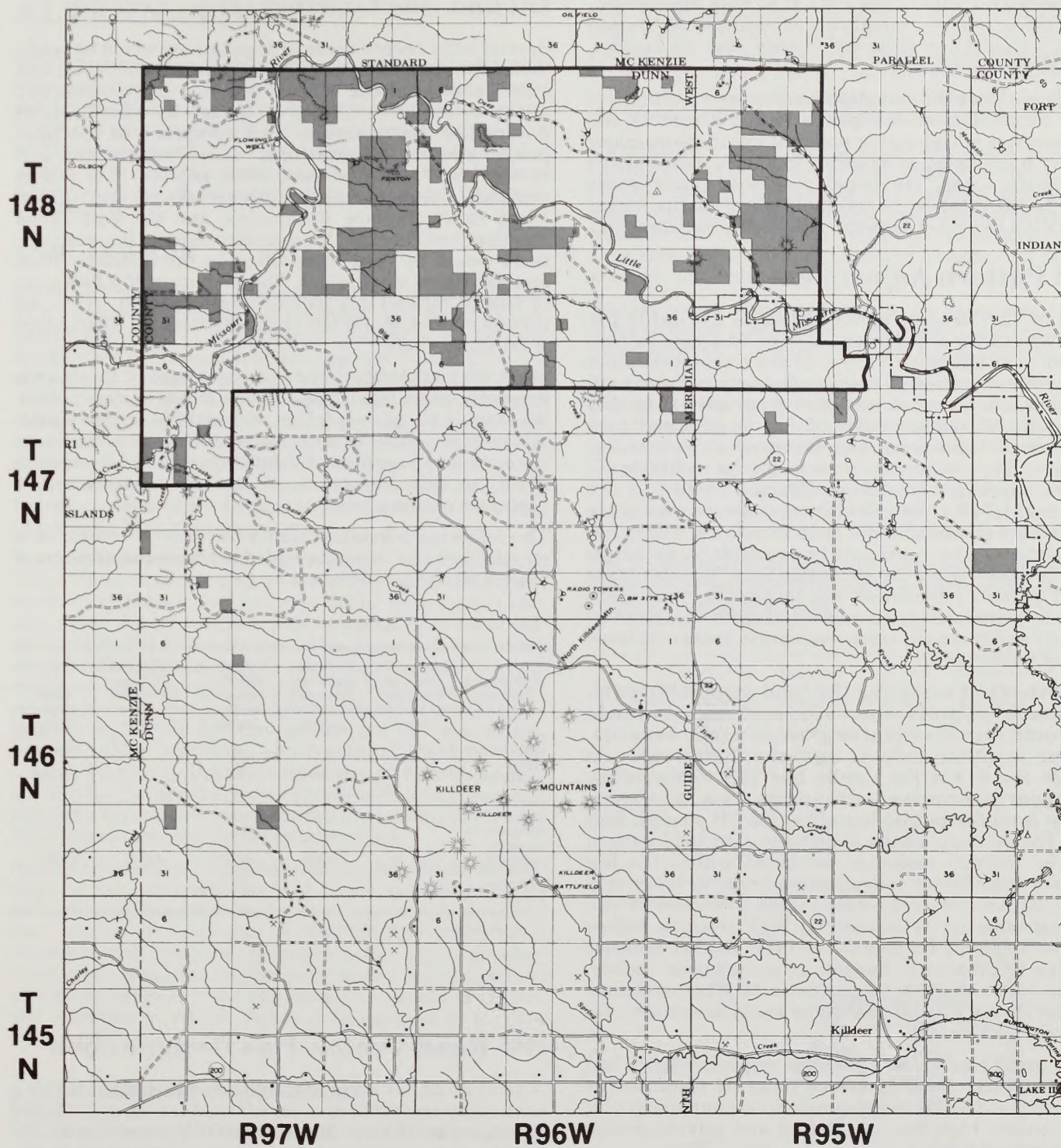


Public lands





Consolidation area boundary — Alternative C only

Map 2-1.



Lost Bridge and Vicinity

-  **Public lands**
 **Consolidation area boundary — Alternative C only**

Map 2-2.

Park Service Units (Appendix B to this document). Fifteen CSAs contain federal coal of sufficient tonnage to support a typical new mine and facility after the application of all coal screens.

Multiple-use tradeoffs excluded from further consideration include concentrations of slopes exceeding 30 percent, cultural resources of regional or national significance, major utility or transportation systems, intensive public use or development areas, municipal watersheds, and areas exceeding the established threshold of regionally important wildlife habitats (**Appendix B to this document**).

Land Pattern Adjustment

A total of **22,739** acres are identified as available for **land ownership adjustment** subject to a case-by-case assessment to determine if there are any resources or other factors present that would preclude the action. Land pattern review criteria are presented in **Appendix D to this document**. All lands outside of Big Gumbo and Lost Bridge consolidation areas and unmanageable tracts containing no high value resources would be available for **land ownership adjustment** (Maps 2-1 and 2-2). An additional **11,715** acres within the consolidation areas are identified for exchange only. Isolated parcels within the consolidation areas would only be available for exchange for lands within either consolidation area. The objectives of land pattern adjustment are to provide units large enough to be intensively managed and easily identified by the public and to consolidate ownership in areas with large blocks of public land.

The methods of adjusting the land ownership pattern, in order of preference, are: exchange for lands that would provide equal or greater public benefits, transfer to other federal agencies better able to manage the lands for public benefits, disposal to state agencies or private groups better able to manage the land for public benefits, R&PP patent, and sales. The primary means of adjusting the land pattern would be through exchange for lands within the Big Gumbo or Lost Bridge consolidation areas, or lands contiguous to tracts retained for manageable resource values. Unmanageable tracts containing high resource values would be available for transfer to other federal agencies that, due to proximity, budget, or management policy, would be better able to manage the tracts. When exchange or transfer is not feasible, the tracts would be available for sale, and R&PP patent.

Private groups or state agencies able to manage and preserve special resource values could be identified as designated bidders in circumstances where unmanageable tracts contain high resource values and private groups have expressed interest.

Protective covenants in patents would be used when necessary to protect high value resources located on unmanageable tracts offered for disposal. However, protective covenants would be the least desirable method of preserving resource values. Protective covenants would be used when they are consistent with county zoning or state law. Compliance/enforcement would thereby be provided by local government officials.

Oil and Gas Leasing

Special lease review areas or stipulations would be established for approximately 206,811 acres of federal oil and gas. **Leases falling within the identified 206,811 acres would be reviewed on a case-by-case basis to determine the necessity and adequacy of the proposed special stipulations.** These stipulations and review areas would be used, when necessary, to protect wetlands, riparian areas, sage grouse leks, elk and bighorn sheep range, raptors, floodplains, and the Fort Union Trading Post National Historic Site. Special lease stipulations would be used in addition to the Montana BLM standard lease stipulations. The remaining **253,583** acres of federal oil and gas located under **federal, state, or private surface** would fall under Montana BLM standard lease stipulations.

Much of the federal oil and gas considered in this plan is presently under lease. Should these leases expire or otherwise terminate, parcels falling within the identified special review areas will be analyzed in greater detail to determine the need for the special stipulations presented in **Appendix C to this document**. No new stipulations will be placed on existing leases.

The following tabulation shows the general categories of stipulations that would be added to leases and acreages of federal oil and gas affected.

Stipulation Category	Low or No Oil/Gas Potential	Moderate Oil/Gas Potential	High Oil/Gas Potential	Unknown Oil/Gas Potential	Total
	(acres)	(acres)	(acres)	(acres)	(acres)
Open with no special stipulations	— ¹	— ¹	— ¹	— ¹	253,583
Open with no surface occupancy or seasonal restrictions	0	103,326	37,020	66,465	206,811
Closed to leasing	0	0	0	0	0

¹ Acreage not available by category.

Off-Road Vehicle Use Designations

A total of 22,164 acres of public land is designated as a seasonally restricted area for off-road travel, and **45,407** acres open to ORV use. **Motorized** ORV use within the Big Gumbo area would be restricted to maintained roads during the period of March 1 through June 1. Travel necessary for emergency, scientific, and maintenance purposes would be excluded from restrictions.

Off-road travel restrictions were developed to protect fragile vegetation and soils during spring thaw when the risk of impacts is greatest. ORV travel stipulations would be incorporated in all future oil and gas leases. Emergency closures may be implemented when needed.

ALTERNATIVE D

This alternative is based on the general theme of protection of amenity values. The protection of values such as cultural resources, wildlife habitats, and recreational opportunities is favored over potentially conflicting uses or actions such as the development of mineral resources or the disposal of public lands. The management actions allow for levels of resource use which do not result in significant long-term adverse impacts.

Coal Leasing

A total of 1,009,648 acres located in 24 CSAs was identified as having coal development potential. The 24 CSAs contain an estimated 17,750 MM tons of minable federal coal. Application of the unsuitability criteria eliminated 193,382 acres from further study. An additional **256,099** acres were excluded from further consideration under the application of the multiple-use screen. A total of 3,403 landowners were consulted regarding their preference towards surface mining of federal coal. The surface owner consultation screen excluded **73,095** acres from further consideration due to significant surface owner opposition to mining (**Appendix B to this document**).

The application of the four coal screens resulted in **522,576** acres, containing an estimated **8,459** MM tons of recoverable federal coal, being excluded from further consideration. Under this alternative, **487,072** acres of federal coal (**9,291** MM tons) would be acceptable for further consideration during activity planning, response to application, or for exchange. Of this, **143,725** acres would be acceptable with special stipulations. **These special stipulations would be for the protection of vegetation, buried-valley aquifers, and National Park Service Units (Appendix B to this document).** Fourteen CSAs containing blocks of federal coal with sufficient tonnage to support a typical new mine and facility remain in the area found acceptable for further consideration.

Areas excluded from consideration due to multiple-use conflicts include: concentrations of slopes exceeding 15 percent, regionally or nationally significant cultural resources, major oil and gas fields, major utility and transportation facilities, intensive public use or development areas, municipal watersheds, buried-valley aquifers, and areas exceeding the established threshold of regionally significant wildlife habitats (**Appendix B to this document**).

Land Pattern Adjustment

No lands were identified for **land ownership adjustment**. Land pattern review criteria are presented in **Appendix D to this document**. All public lands in North Dakota would be retained except for disposals in response to outside applications. Based on the number of cases processed in the past ten years, few applications would be received for R&PPs, withdrawals, and Color-of-Title patents. Each application or request would be reviewed through an environmental analysis and land report.

Oil and Gas Leasing

Special lease review areas or stipulations would be established for approximately **107,314** acres of federal oil and

gas. These stipulations and review areas would be used, when necessary, to protect wetlands, riparian areas, sage grouse leks, elk and bighorn sheep range, raptors, floodplains, and the Fort Union Trading Post National Historic Site. Special lease stipulations would be used in addition to the Montana BLM standard lease stipulations.

Up to 99,497 acres of federal oil and gas would be closed to leasing for the protection of nesting golden eagles, prairie falcons, ferruginous hawks, sage grouse, seasonal use areas of elk and bighorn sheep, and riparian habitat. The remaining areas of federal oil and gas located under BLM or private surface would fall under Montana BLM standard lease stipulations.

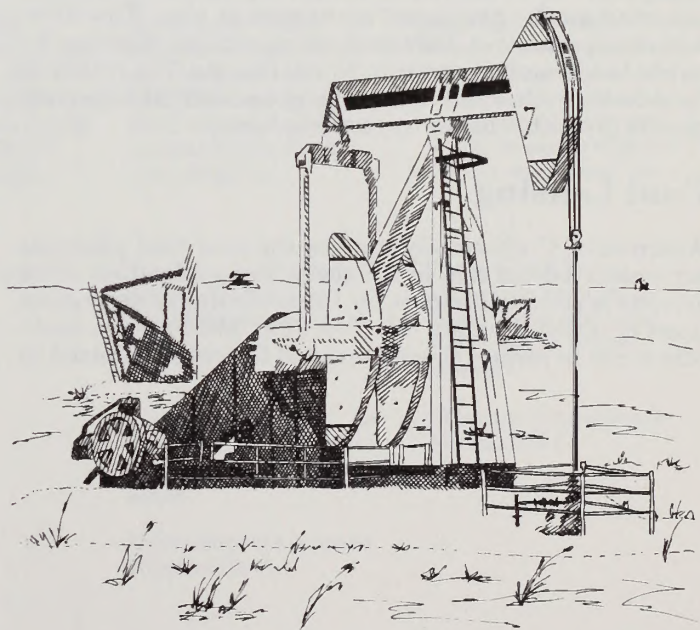
Special review and lease stipulation areas would be the same as under Alternative C. However, lease stipulations would generally be more restrictive under this alternative.

Much of the federal oil and gas considered in this plan is presently under lease. Should these leases expire or otherwise terminate, parcels falling within the identified special review areas will be analyzed in greater detail to determine the need for the special stipulations presented in **Appendix C to this document**. No new stipulations will be placed on existing leases. No new oil and gas leases would be issued in the 99,497 acres identified as closed to leasing.

The following tabulation shows the general categories of stipulations that would be added to leases and acreages of federal oil and gas affected.

Stipulation Category	Low or No Oil/Gas Potential	Moderate Oil/Gas Potential	High Oil/Gas Potential	Unknown Oil/Gas Potential	Total
	(acres)	(acres)	(acres)	(acres)	(acres)
Open	— ¹	— ¹	— ¹	— ¹	253,583
Open with no surface occupancy or seasonal restrictions	0	7,559	33,290	66,465	107,314
Closed to leasing	0	70,036	29,461	0	99,497

¹Acreage not available by category.



Off-Road Vehicle Use Designations

This alternative would limit **motorized** ORV use on the 22,164 acres in the Big Gumbo area to existing roads and trails. In addition, travel in the Big Gumbo area would be limited to maintained roads during the period of March 1 through June 1. Trails, as identified through monitoring, causing unnecessary damage to soils and vegetation would be closed to all travel. Scientific, maintenance, and emergency uses would be excluded from restriction. All other surface lands would be designated as open for ORV travel.

Off-road travel restrictions were developed for the Big Gumbo area to protect fragile vegetation and soils where current or potential ORV conflicts exist. Emergency closures may be made in all areas when needed.

SUMMARY OF ENVIRONMENTAL IMPACTS

The projected impacts of implementing each of the four alternatives are summarized in Table 2-2. Detailed discussions of impacts are presented in Chapter Four of the Draft.

SELECTION OF THE *PROPOSED* ALTERNATIVE

In selecting the **proposed** management plan each alternative was reviewed for:

- 1) effectiveness in resolving planning issues,
- 2) conformance with the guidance established by the planning criteria,
- 3) avoidance of unnecessary impacts to the human environment,
- 4) **and responsiveness to public input.**

Alternative C, as **modified following public review, is selected as the proposed** management plan. This alternative represents a balanced management strategy for public lands and minerals in North Dakota. The rationale for selecting Alternative C as the **proposed** management plan is presented below by resource issue.

Coal Leasing

Alternative C effectively applies the four coal planning screens to federal coal in the state. The application of the screens is complete except for the preliminary determinations of alluvial valley floors (AVFs). Multiple-use trade-offs made in respect to coal respond to concerns raised by

the public that have been incorporated in the planning criteria. This alternative allows **573,868** acres of federal coal to go forward as acceptable for further consideration for coal leasing **or exchange**.

Coal acceptable for further consideration is located in 24 CSAs throughout the western half of the state and could support new mines and facilities in up to 15 CSAs. Alternative C finds greater federal coal acreage acceptable for further consideration in more CSAs than under current management. At the same time, Alternative C provides increased protection to resources such as wildlife habitat and erodible soils.

Land Pattern Adjustment

Alternative C establishes specific management direction for the land pattern adjustment program through identification of a set of site-specific review criteria, an initial **categorization** of all public lands in the state, and the identification of two primary land consolidation areas. This alternative allows the flexibility necessary to effect a large scale repositioning of public lands while firmly establishing the goals and restrictions of land pattern adjustment. Alternative C expands land pattern adjustment opportunities under present management by including all public lands in the state.

Oil and Gas Leasing

Alternative C identifies special stipulations necessary to protect resource values identified in the planning criteria while continuing to allow development of most federal oil and gas in the state. The special stipulations identified generally represent the minimum restriction necessary to protect sensitive resources. Identification of special stipulations prior to lease offering and, especially, APD approval, ensures that both operators and BLM recognize the presence of potential conflicts. Identifying possible restrictions at this stage also facilitates long-range planning by industry.

Off-Road Vehicle Use Designations

Alternative C fulfills the need for ORV travel restrictions as mandated by EO 11644. ORV travel would be essentially unrestricted on public lands. Seasonal restrictions in the Big Gumbo area are prescribed to protect fragile soils and vegetation during wet periods. These seasonal restrictions address the resource concerns in the planning criteria while having minimal impact on ORV users. There is presently little evidence of either significant demand for ORV opportunities or adverse impacts resulting from ORV use. However, this alternative would effectively accommodate any foreseeable increase in demand while avoiding unnecessary resource protection.

TABLE 2-2
SUMMARY OF ENVIRONMENTAL IMPACTS

Resource	Alternative A	Alternative B	Alternative C	Alternative D
Air Quality	<p>Mining would increase particulates. New facilities on up to 13 CSAs would increase pollution.</p> <p>Oil and gas development on up to 460,394 acres would continue to create offensive odors and potential health problems through increasing H₂S and SO₂ releases.</p>	<p>Same impacts occurring on up to 16 CSAs.</p> <p>Same oil- and gas-related impacts as Alternative A.</p>	<p>Same impacts occurring on up to 15 CSAs.</p> <p>Same oil- and gas-related impacts as Alternative A.</p>	<p>Same impacts occurring on up to 14 CSAs.</p> <p>Same oil- and gas-related impacts as Alternative A occurring as a result of development of up to 360,897 acres.</p>
Minerals				
Coal	Up to 391,179 acres of federal coal would presumably be mined. New mines and facilities could be supported by federal coal on 13 CSAs.	Up to 599,496 acres of federal coal would presumably be mined. New mines and facilities could be supported by federal coal on 16 CSAs.	Up to 573,868 acres of federal coal would presumably be mined. New mines and facilities could be supported by federal coal on 15 CSAs.	Up to 487,072 acres of federal coal would presumably be mined. New mines and facilities could be supported by federal coal on 14 CSAs.
Oil and Gas	<p>Special stipulations on 29,136 acres would have long-term effects through increased development costs.</p> <p>Land pattern adjustment of up to 9,539 acres of public lands would complicate administration of leases.</p>	<p>Land pattern adjustment of up to 38,680 acres of public lands would complicate administration of leases.</p>	<p>Special stipulations on up to 206,811 acres would have long-term effects through increased development costs.</p> <p>Land pattern adjustment of up to 34,454 acres of public lands would complicate administration of leases.</p>	<p>Special stipulations on up to 107,314 acres would have long-term effects through increased development costs.</p> <p>Closure of 99,497 acres to leasing would result in foregone development of the federal oil and gas.</p>
Other Minerals	<p>Construction materials would be lost in the long term following mining of up to 391,179 acres of federal coal.</p> <p>Disposal of up to 9,539 acres of public lands would complicate future mineral management.</p>	<p>Same impacts as Alternative A occurring on up to 599,496 acres of coal and up to 38,680 acres of public lands.</p>	<p>Same impacts as Alternative A occurring on up to 573,868 acres of coal and up to 34,663 acres of public lands.</p>	<p>Same impacts as Alternative A occurring on up to 487,072 acres of coal.</p>
Soils	<p>Coal mining on up to 391,179 acres would cause short-term soil erosion, compaction, instability, and loss of productivity. Long-term erosion would occur on up to 2,793 acres of steep slopes acceptable for further consideration.</p> <p>Continuation of current range management would decrease erosion in the long term.</p> <p>ORV use would perpetuate minor erosion and compaction problems.</p> <p>Continued application of Montana BLM oil and gas lease stipulations would minimize impacts to soil.</p>	<p>Same coal-related impacts as Alternative A occurring on up to 599,496 acres, except long-term erosion would occur on up to 79,478 acres of steep slopes.</p> <p>Other impacts same as Alternative A.</p>	<p>Same coal-related impacts as Alternative A occurring on up to 573,868 acres except no steep slopes would be acceptable for further consideration.</p> <p>Continuation of current range management would decrease erosion in the long term.</p> <p>Limitations on ORV use would minimize erosion and compaction on 22,164 acres.</p> <p>Other impacts same as Alternative A.</p>	<p>Same coal-related impacts as Alternative A occurring on up to 487,072 acres, except no slopes over 15 percent would be acceptable for further consideration.</p> <p>There would be no impacts to soils on up to 99,497 acres of oil and gas closed to future leasing.</p> <p>Other impacts same as Alternative C.</p>

TABLE 2-2 (continued)
SUMMARY OF ENVIRONMENTAL IMPACTS

Resource	Alternative A	Alternative B	Alternative C	Alternative D
Hydrology	Coal mining on up to 391,179 acres would cause short-term erosion and disrupt infiltration with resulting decrease in ground water recharge.	Same coal-related impacts as Alternative A occurring on up to 599,496 acres.	Same coal-related impacts as Alternative A occurring on up to 573,868 acres except buried-valley aquifers could be protected on up to 12,318 acres through special lease stipulations.	Same coal-related impacts as Alternative A on up to 487,072 acres, except buried-valley aquifers would be excluded from further consideration for leasing or exchange on 32,273 acres.
	Springs, seeps and shallow wells may become dry or have lower levels for the long term. Shallow ground water quality and quantity may drop in the short- and long-term.			
	Land pattern adjustment of up to 9,539 acres would improve manageability allowing reductions in water yields, improvement in water quality and a decrease in erosion and sedimentation in the long term.	Same impacts related to land pattern adjustment as Alternative A occurring on up to 38,680 acres.	Same impacts related to land pattern adjustment as Alternative A occurring on up to 34,454 acres.	No land pattern adjustment under this alternative.
		Other impacts same as Alternative A.	Limitations on ORV use would reduce water degradation on 22,164 acres.	Limitations of ORV use on 22,164 acres would minimize impacts to water resources.
	Oil and gas activity would cause short-term increases in erosion and sedimentation on individual well locations. There may also be long-term decreases in water quantity and degradation of water quality.		Other impacts same as Alternative A.	Water resources would not be affected by development of future oil and gas leases on the 99,497 acres closed to leasing.
Vegetation	Coal mining on up to 391,179 acres would cause a short-term loss in vegetative productivity and a long-term loss in species diversity.	Same coal-related impacts as Alternative A occurring on up to 599,496 acres.	Same coal-related impacts as Alternative A occurring on up to 573,868 acres.	Same coal-related impacts as Alternative A occurring on up to 487,072 acres.
	Continuation of current range management would increase total vegetative production by about 6.5 percent in the long term.	Other impacts same as Alternative A.		
	ORV use would cause minor vegetative loss in the short and sometimes long term.		Limitations on ORV use would minimize short- and long-term vegetative loss on 22,164 acres.	
	Oil and gas activity would cause both short- and long-term loss of vegetative productivity on individual well locations.		Other impacts same as Alternative A.	Vegetation would not be affected by development of future oil and gas leases on the 99,497 acres closed to leasing. Other impacts same as Alternative C.

TABLE 2-2 (continued)
SUMMARY OF ENVIRONMENTAL IMPACTS

Resource	Alternative A	Alternative B	Alternative C	Alternative D
Wildlife	Coal mining on up to 391,179 acres would cause the short- and long-term loss of local wildlife populations and habitat including 47,373 acres of woody draws.	Same coal-related impacts as Alternative A occurring on up to 599,496 acres including 29,246 acres of woody draws. Special stipulations on 152,487 acres would ensure restoration of important habitats.	Same coal-related impacts as Alternative A occurring on up to 573,868 acres including 16,771 acres of woody draws. Special stipulations on 150,380 acres would ensure restoration of important habitat.	Same coal-related impacts as Alternative A occurring on up to 487,072 including 6,117 acres of woody draws. Special stipulations on 111,030 acres would ensure restoration of important habitats.
	Land pattern adjustment on up to 9,539 acres would promote opportunities for habitat enhancement in the long term.	Same impacts related to land pattern adjustment as Alternative A occurring on up to 38,680 acres.	Same impacts related to land pattern adjustment as Alternative A occurring on up to 34,454 acres.	No land pattern adjustments under this alternative; reduced opportunity for habitat enhancement.
	ORV use would cause localized loss of wildlife habitat which may reduce wildlife populations in the long term.	ORV impacts same as Alternative A.	Limitations on ORV use would minimize short- and long-term impacts to wildlife habitats and populations on 22,164 acres.	Same ORV impacts as Alternative C.
	Special stipulations on new oil and gas leases applied in addition to Montana BLM standard stipulations on 29,136 acres would provide long-term protection to key species. Significant long-term losses are expected on 178,077 acres.	Montana BLM Standard Oil and Gas Stipulations applied to 460,394 acres would have long-term adverse impacts on key wildlife species and habitats.	Special stipulations on new oil and gas leases applied in addition to Montana BLM Standard Stipulations on 206,811 acres would protect key wildlife species and habitats.	Special stipulations on new oil and gas leases applied in addition to Montana BLM Standard Stipulations on 107,314 acres would protect key wildlife species and habitats. Wildlife resource would be protected from development of future oil and gas leases on the 99,497 acres closed to leasing.
Agriculture	Coal mining would cause the short-term loss of crop production on 274,000 acres. Individual farmers could have some of their operation out of production for the life of the mine.	Same coal-related impacts as Alternative A occurring on up to 384,000 acres of cropland.	Same coal-related impacts as Alternative A occurring on up to 381,000 acres of cropland.	Same coal-related impacts as Alternative A occurring on up to 332,000 acres of cropland.
	Land pattern adjustment on up to 9,539 acres would enhance opportunities for greater range production and livestock use.	Same impacts related to land pattern adjustment as Alternative A occurring on up to 38,680 acres.	Same impacts related to land pattern adjustment as Alternative A occurring on up to 34,454 acres.	No land pattern adjustment under this alternative.
	Sale of scattered tracts may disrupt individual lessee's livestock operations over the short term.	Other impacts same as Alternative A.	Other impacts same as Alternative A.	Other impacts same as Alternative A.
Lands and Realty	Removing land classifications on about 8,000 acres would increase the public land acreage in multiple-use in the long term. The land pattern adjustment of up to 9,539 acres would mean the long-term loss acreage in the public land base and an overall increase in public benefits on the lands acquired.	Impacts the same as Alternative A except up to 38,680 acres would be available for land pattern adjustment.	Impacts the same as Alternative A except up to 34,454 acres would be available for land pattern adjustment.	Impacts the same as Alternative A except no lands would be repositioned by sales or exchanges.

TABLE 2-2 (continued)
SUMMARY OF ENVIRONMENTAL IMPACTS

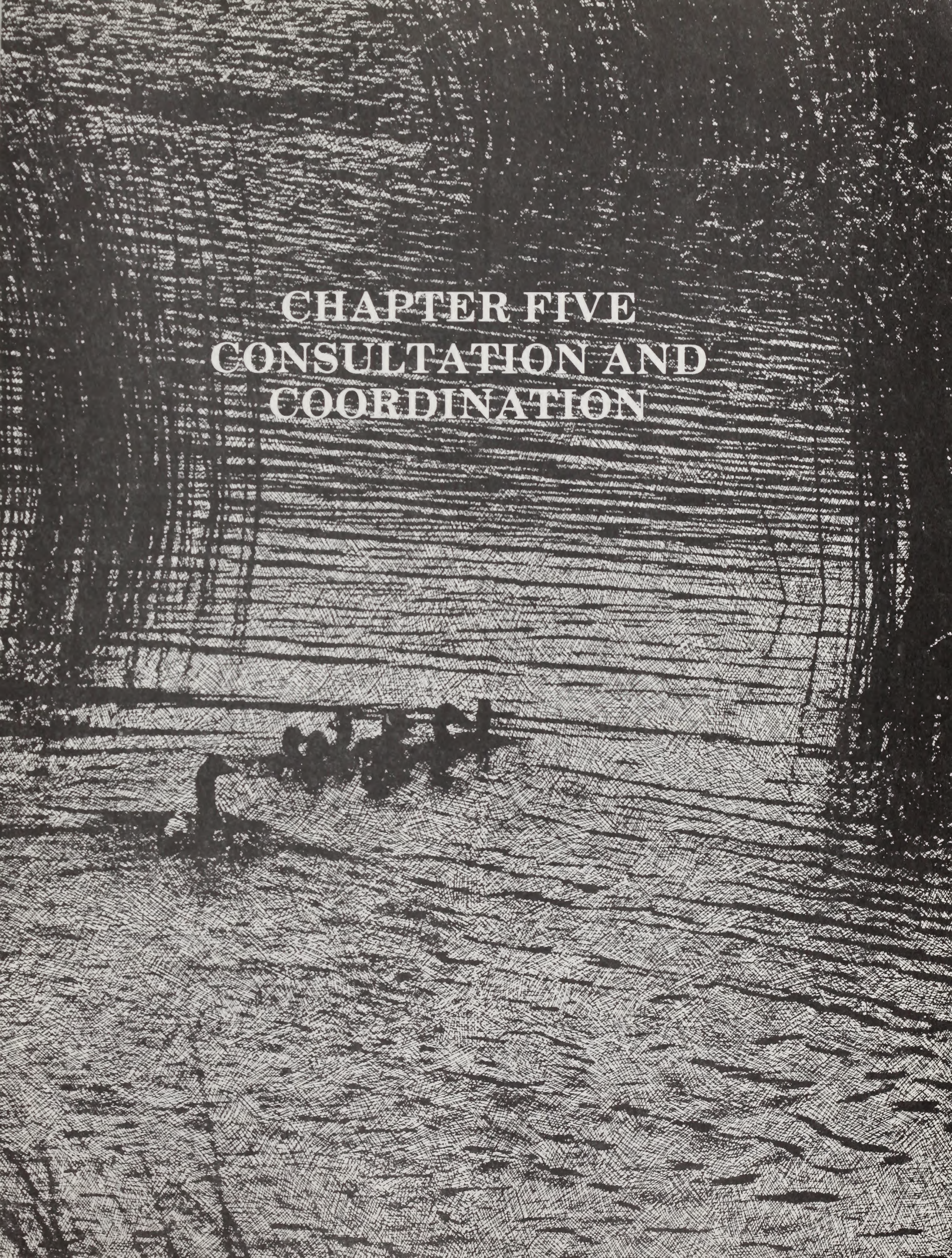
Resource	Alternative A	Alternative B	Alternative C	Alternative D
Recreation and Visual Resources	Coal mining on up to 391,179 acres would cause the short-term loss of recreational resources.	Same coal-related impacts as Alternative A occurring on up to 599,496 acres.	Same coal-related impacts as Alternative A occurring on up to 573,868 acres.	Same coal-related impacts as Alternative A occurring on up to 487,072 acres.
	There would be a long-term increase in recreational demands in areas being mined due to influx of population.	Other impacts same as Alternative A.		Other impacts same as Alternative C.
	There would be long-term visual intrusions caused by mining operations.			
	Pooling of public lands would increase recreational opportunities in the long term.			
	Recreational opportunities would be enhanced in the long term by unrestricted ORV designation.		ORV use restrictions would only slightly limit recreation activities on 22,164 acres.	
	Oil and gas development would limit hunting and decrease recreational quality while increasing pressure on adjacent areas in the long term.		Other impacts same as Alternative A.	
	Road development due to oil and gas activity would enhance access in the long term.			
Cultural Resources	Oil and gas facilities would be a long-term visual intrusion.			
	Coal mining on up to 391,179 acres could adversely affect an estimated 156-782 sites eligible for listing on the NRHP.	Coal mining on up to 599,496 acres could adversely affect an estimated 239-1194 sites eligible for listing on the NRHP.	Coal mining on up to 573,868 acres could adversely affect an estimated 229-1143 sites eligible for listing on the NRHP.	Coal mining on up to 487,072 acres could adversely affect an estimated 194-969 sites eligible for listing on the NRHP.
	Land pattern adjustment on up to 9,539 acres would affect an estimated 77 cultural resources.	Land pattern adjustment on up to 38,680 acres would affect an estimated 311 cultural resources.	Land pattern adjustment on up to 34,454 acres would affect an estimated 277 cultural resources.	No land pattern adjustment.
	Unrestricted ORV use on public lands would cause minor vehicle damage and unauthorized collections to cultural resources in the long term.	Other impacts same as Alternative A.	Seasonal limitations of ORV use on 22,164 acres would reduce impacts to cultural resources.	Limitations of ORV use to roads and trails on 22,164 acres would minimize impacts to cultural resources.
	Impacts to cultural resources resulting from oil and gas development would be slight.		Other impacts same as Alternative A.	Cultural resources would not be affected by development of future oil and gas leases on the 99,497 acres closed to leasing.

TABLE 2-2 (continued)
SUMMARY OF ENVIRONMENTAL IMPACTS

Resource	Alternative A	Alternative B	Alternative C	Alternative D
Paleontology	<p>Coal mining on up to 391,179 acres potentially affecting 10 known sites over federal coal.</p> <p>Land pattern adjustment would mean the loss of an undetermined number of fossil sites if not discovered before sale.</p> <p>Unrestricted ORV use may cause minor impacts from fossil prospecting.</p> <p>Impacts slight under continued application of Montana BLM standard stipulations for oil and gas.</p>	<p>Coal mining on up to 599,496 acres potentially affecting 11 known sites over federal coal.</p> <p>Other impacts same as Alternative A.</p>	<p>Coal mining on up to 573,868 acres potentially affecting 11 known sites over federal coal.</p> <p>Limitations on ORV use would minimize impacts from fossil prospecting on 22,164 acres.</p> <p>Other impacts same as Alternative A.</p>	<p>Coal mining on up to 487,072 acres potentially affecting 11 known sites over federal coal.</p> <p>No land pattern adjustment.</p> <p>Same ORV impacts as Alternative C.</p> <p>Paleontological resources would be protected from development of future oil and gas leases on the 99,497 acres closed to leasing.</p>
Economic and Social Condition	<p>Individual mines and facilities on up to 13 CSAs would result in: short-term direct and indirect employment of 2,500 persons, long-term employment of 1,150 persons, short-term in-migration of 2,000 persons, long-term in-migration of 1,100 persons, stressed infrastructure in short term, and foregone agricultural production.</p> <p>Long-term coal severance taxes would increase 23 percent over 1985 payments. Coal conversion taxes would increase 31 percent over 1985.</p> <p>Social impacts of coal development would include: lessened familiarity between residents, greater diversity in lifestyles, changes in business transactions, threatened livelihood, and threatened quality of environment.</p> <p>Social impacts would generally decrease in long term. Residents of Fort Berthold and Standing Rock Indian Reservations would experience social impacts similar to those above.</p>	<p>Impacts same as Alternative A occurring on up to 16 CSAs.</p>	<p>Impacts same as Alternative A occurring on up to 15 CSAs.</p>	<p>Impacts same as Alternative A occurring on up to 14 CSAs except for loss of severance taxes on potential production of oil and gas on 99,497 acres closed to leasing.</p>

TABLE 2-2 (continued)
SUMMARY OF ENVIRONMENTAL IMPACTS

Resource	Alternative A	Alternative B	Alternative C	Alternative D
	Oil and gas exploration and development would continue to provide local employment. Severance taxes would benefit state government and mitigation of energy development impacts.			

The background of the page is a high-contrast, black and white photograph. It depicts a large, textured wall, possibly made of stone or brick, which fills most of the frame. The wall has a rough, uneven surface with many small, dark spots and lines. In the lower-left foreground, there is a dark, silhouetted figure of a person standing, looking towards the wall. The overall lighting is very dramatic, with deep shadows and bright highlights, creating a somber and mysterious atmosphere.

CHAPTER FIVE CONSULTATION AND COORDINATION

CHAPTER FIVE

COORDINATION AND CONSULTATION

PREPARATION

The North Dakota RMP was prepared by specialists from the Dickinson District Office, with assistance and guidance from the Montana BLM State Office disciplines. Skills used to develop this RMP were vegetation and range-land use, geology, hydrology, recreation, soil science, air quality, archaeology and paleontology, realty, wildlife and fisheries biology, animal science, forestry, economics, sociology, graphics and typing. Preparation of this RMP began in 1984 with a Federal Register notice of intent to initiate a planning activity.

PUBLIC PARTICIPATION

Public participation occurred at **four** major steps during the preparation of this **final** RMP/EIS:

- (1) Scoping or Identification of Issues,
- (2) Development of Planning Criteria
- (3) Surface Owner Consultation, and
- (4) **Public Review of Draft RMP/EIS**

Public participation activities conducted during each of these steps are discussed below.

Scoping or Identification of Issues

Public participation activities for the North Dakota RMP/EIS began with the December 19, 1984, Federal Register Notice announcing the intent to initiate planning activity. This notice of intent also invited the public to suggest resource management issues to be considered, and included a call for coal resource information. A news release requesting similar public input was issued to media throughout North Dakota December 20, 1984. A supplement to the notice of intent identifying the four alternatives considered in the RMP/EIS was published in the February 28, 1986, Federal Register.

A brochure describing the BLM planning process, opportunities for public input, and anticipated planning issues was mailed to approximately 300 persons, groups, or agencies during February and March of 1985. This brochure included a return mailer for providing suggestions of issues to be considered in the plan. The Dickinson District received 33 responses to the brochure.

Five public meetings were held during March and April of 1985 to aid in identifying issues and planning criteria. The scoping meetings were held in Bowman, Dickinson, Hazen, Towner, and Williston, North Dakota. A total of 38 persons attended. News releases announcing the meetings and requesting suggested issues were issued to media servicing the general area surrounding the meeting locations.

Development of Planning Criteria

On July 10, 1985, a news release was issued to selected news media throughout North Dakota announcing the availa-

bility of issues and planning criteria. The issues and planning criteria were available for a 30-day comment period ending August 14, 1985. Two comments were received.

Surface Owner Consultation

Beginning in December 1985, 1844 surface owners over federal coal were consulted regarding their preference towards coal mining. Three public open houses were held during December 1985 to answer questions regarding the consultation process. Two news releases were issued to announce the consultation process, open houses, and deadlines for response. These news releases were issued to media located in proximity to the CSAs and major population centers within the state (**Appendix B to this document**).

Public Review of Draft RMP/EIS

Copies of **the draft RMP/EIS** were provided to approximately 430 persons, groups, local governments, and agencies that expressed interest in the management of public lands and minerals in North Dakota. The mailing list was compiled using names and addresses of: (1) parties actively involved in past planning and environmental analysis activities, (2) parties responding to our call for suggested issues and resource information, (3) parties requesting further information **or copies of the RMP/EIS** during the preparation of the plan, (4) agencies, governments, and corporations potentially affected by the plan, and (5) agencies, groups, and tribes consulted during preparation of the RMP/EIS.

The draft RMP/EIS was available for public review and comment December 22, 1986, through March 25, 1987. A total of 36 parties provided written comments on the draft during the comment period. All of the written comments received during the comment period are reproduced under the Response to Comments portion of this document. Four public meetings were held in January and February 1987 to discuss the draft RMP/EIS and to obtain public comments. Meetings were held in Dickinson, Williston, Hazen, and Bowman, North Dakota. A total of 43 persons attended. Comments and questions received at the meetings are summarized under the Response to Comments portion of this document.

AGENCIES, ORGANIZATIONS AND INDIVIDUALS CONSULTED

The North Dakota RMP/EIS team consulted and/or received comments from the following organizations and agencies during the preparation of this document.

Interest Groups

American Fisheries Society
Audubon Society
Badlands Environmental Association
Billings County Surface Interest Association
Council of Energy Resource Tribes
Dakota Resource Council
Defenders of Wildlife
Dunn County United Plainsmen Association
Friends of the Earth
Garrison Diversion Conservancy District
Isaak Walton League
Lewis and Clark 1805 Regional Council for Development
McKenzie County Energy and Taxation Committee
McKenzie County Grazing Association
Mercer County Landowners Association
Mountain States Legal Foundation
National Wildlife Federation
Natural Resources Defense Council
North Dakota Archaeological Association
North Dakota Association of Soil Conservation Districts
North Dakota Chapter The Wildlife Society
North Dakota Grazing Association
North Dakota Lamb and Wool Producers Assoc.
North Dakota Lignite Council
North Dakota Parks and Recreation Association
North Dakota Petroleum Council
North Dakota Paleontological Society
North Dakota Stockmens Association
North Dakota REC
North Dakota Wildlife Federation
Northern Plains Resource Council
Professional Council for North Dakota Heritage
Rocky Mountain Oil and Gas Association
Roosevelt-Custer Regional Council for Development
Roughrider 4 X 4 and Off-road Club
Sierra Club
South Central Dakota Regional Council
United Sportsmen
Watford City Wildlife Club

North Dakota State Legislators

U.S. Congressmen

Representative Byron Dorgan
Senator Mark Andrews
Senator Kent Conrad
Senator Quentin Burdick

Federal Agencies

Bureau of Indian Affairs
Bureau of Reclamation
Corps of Engineers
Department of the Air Force
Environmental Protection Agency
Federal Highway Department
Fish and Wildlife Service
Forest Service
Geological Survey
National Park Service
Office of Surface Mining Reclamation and Enforcement
Soil Conservation Service

State and Local Government

North Dakota, State of
Agriculture Department
Department of Health

Energy Development Impact Office
Game and Fish Department
Geological Survey
Highway Department
Historical Society
Industrial Commission
Land Department
Office of Intergovernmental Affairs
Parks and Recreation Department
Public Service Commission
Water Commission

County Commissioners, County Agents, Planning Boards, etc.

Adams
Barnes
Benson
Billings
Bottineau
Bowman
Burke
Burleigh
Cavalier
Divide
Dunn
Eddy
Emmons
Golden Valley
Grand Forks
Grant
Hettinger
Kidder
Logan
McHenry
McIntosh
McKenzie
McLean
Mercer
Morton
Mountrail
Oliver
Pierce
Renville
Sheridan
Slope
Stark
Stutsman
Walsh
Ward
Williams

City of Dickinson

Indian Tribes

Devils Lake Sioux Tribal Council
The Mandan, Hidatsa and Arikara Business Council
Sisseton Wahpeton Sioux Tribal Council
Standing Rock Sioux Tribal Council
Turtle Mountain Band of Chippewa

Individuals, Academia and Industry

Approximately 300 individuals, area institutions of higher learning, and other firms or agencies known to be interested in North Dakota planning and resources and those requesting information following Federal Register notices, news releases, and public meetings were contacted.

LIST OF PREPARERS

Project Management

Project Manager

Mark Stiles was responsible for the overall management of the interdisciplinary team and coordination of the document preparation process. He has a BS in Wildlife Biology and an MS in Economics, both from Colorado State University. He has been with the BLM for six years.

Interdisciplinary Team

Core Team

The core team that directed and coordinated the gathering of information to assess and evaluate the various resources represented by the public lands and minerals in North Dakota included:

Jerry Crockford, Realty Specialist

Jerry wrote the lands and mineral materials portions. He has done undergraduate work in Biology at Black Hills State College and Sheridan Community College. He has been with the BLM for eleven years.

Earl Greene, Hydrologist

Earl wrote the hydrology and other sections of the document and coordinated the preparation of maps and overlays. He has a BS in Forest Resources Management from the University of Minnesota and a MS in Hydrology from the University of Idaho. He has five years of federal work experience, three with the Forest Service and two years with the BLM.

Terrell Rich, Wildlife Biologist

Terry wrote the wildlife and vegetation portions and compiled resource assessment acreages. He has a BS in Wildlife Ecology from the University of Wisconsin and a MS in Zoology from Idaho State University. He has been with the BLM for eight years.

Don Ruffedt, Soil Scientist

Don prepared the soil, topography, and reclamation sections and assisted with the vegetation section. He has a BS in Soil Science from the University of Wisconsin at Stevens Point. He has 12 years of federal work experience, two years with the Bureau of Indian Affairs and ten years with the BLM.

Gary Smith, Archaeologist

Gary wrote the cultural resource management section, paleontology and other sections of the RMP/EIS. He has a BA in Anthropology from the University of Colorado at Boulder and a MA in Anthropology from Colorado State University. He has been with the BLM for two years.

Lyle Chase, Range Conservationist

Lyle wrote the agriculture and other sections of the RMP/EIS. He has a BS in Animal Science/Range Management from South Dakota State University. He has been with the BLM for twenty-four years.

James Rasmussen, Environmental Scientist

Jim wrote the air quality section and assisted in preparation of the oil and gas portions. He has a BA in Biology and Chemistry from Mount Marty College and a MES in Environmental Science from the University of Oklahoma. He has 11 years of federal experience, including eight years with the BLM.

Linn Gum, Geologist

Linn coordinated and assisted in the preparation of oil and gas portions. He has a BA in History and Geography from the University of Nebraska at Omaha and a BA in Geology and Environmental Science from the University of Colorado at Colorado Springs. He has seven years of federal service with Geological Survey, Minerals Management Service and BLM.

John Spencer, Geologist

John prepared the estimations of coal development potential and coal tonnages. He also assisted in preparation of coal-related portions of the RMP/EIS. He has a BS in Geology from the University of California at Riverside and a MS in Earth Science from Iowa State University. He has 13 years of federal service with Geological Survey, Minerals Management Service and BLM.

Jim Hetzer, Writer Editor

Jim wrote portions of the draft RMP/EIS and edited the document. He has a BA in Journalism from the University of Colorado at Boulder. He has been with the BLM for eight years.

Joan Trent, Sociologist

Joan wrote the sociology and economics portions. She has a BA in Psychology and a MEn in Environmental Science, both from Miami University of Ohio. She has seven years of experience with the BLM.

Management Guidance

Management guidance was provided throughout the project by Ken Burke and Bill Krech of the BLM Dickinson District Office.

Program Guidance and Technical Review

The BLM Montana State Office staff provided program guidance and technical review throughout the project. Members of the BLM Montana State Office staff also participated in interdisciplinary conflict resolution.

Other Specialists

Graphics and printing were provided by Rick Kirkness and his staff of the BLM Montana State Office. Cartographic support was provided by Chuck Sigafos and Corla DeBar of the BLM Montana State Office.

Clerical support and word processing were provided by Jackie Kovash, Lynne Ridl, Corinne Walter, and Karen Wolf of the Dickinson District Office.

PUBLIC COMMENTS AND RESPONSE

Comments were obtained from persons attending four public meetings held in January and February 1987 and four parties providing written comments during the 90-day review of the draft document. A total of 43 persons attended the meetings and 36 parties provided written comments.

All comment letters have been reprinted here. Oral comments provided during the four public meetings have also been printed in this section.

A total of 208 comments were identified that require response, either in the form of modification to the draft document, explanation, or clarification. Written statements requiring response are identified by number along the margins of the letter. Each oral comment is also numbered. The numbers refer to the appropriate response. Responses to comments are provided at the end of the reprinted public comments.

List of Commenters and Order of Presentation

Dakota Resource Council
Chevron USA, Inc.
Professional Council for North Dakota Heritage
Jeani L. Borchert
Lowell Blikre
Michelle Hoff
North Dakota State Department of Health
McKenzie County Energy and Taxation Association
Cherie E. Haury
U.S. Forest Service, Medora Ranger District
University of North Dakota, Department of Anthropology (Ahler)
University of North Dakota, Department of Anthropology (Kordecki)
Fern E. Swenson
Paul R. Picha
The Nokota Company
Amerada Hess Corp.
University of North Dakota, Department of Anthropology (Artz)
Kirk Koepsel
U.S. Office of Surface Mining Reclamation and Enforcement
U.S. Soil Conservation Service
U.S. Bureau of Reclamation
State Historical Society of North Dakota
True Oil Company
Michael L. Gregg
U.S. Fish and Wildlife Service
Marathon Oil Company
Sierra Club, Dacotah Chapter
North Dakota State Water Commission
Rocky Mountain Oil and Gas Association
North Dakota Parks and Recreation Department
Mandan, Hidatsa and Arikara Tribes
Diamond Shamrock Exploration Company
Mountain States Legal Foundation
National Park Service
U.S. Environmental Protection Agency
North Dakota Game and Fish Department
Public Meetings
 Dickinson
 Williston
 Hazen
 Bowman

DAKOTA RESOURCE COUNCIL

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29 Seventh Avenue West
Dickinson, ND 58601
(701) 227-1851

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Box 2024
118 1/2 1st Ave. S. #4
Jamestown, ND 58402
(701) 232-3416

March 25, 1987

Mark Stiles, Project Manager
Dickinson District Office
Bureau of Land Management
P.O. Box 1229
Dickinson, ND 58602

Dear Mr. Stiles:

Enclosed are comments from the Dakota Resource Council on your draft Resource Management Plan. There does seem to be an attempt at improving it over previous plans and we commend BLM for this. Most evident is the section dealing with multiple-use tradeoffs and wildlife thresholds.

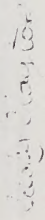
We found it difficult to review several sections, however. We could not gauge whether we agreed with the conclusions that you came up with because we did not know how you came to those conclusions. In several cases we were required to look at three or four different sections in order to compare two alternatives. Only then did we find out that the information we were looking for was not included in the plan.

The bulk of our comments deals with clarification of data and a greater differentiation of the four alternatives. If one of the purposes of the draft plan is to present alternatives, then these alternatives should be distinctly separated and representative of the alternative objective. The four alternatives presented were very similar with only one or two factors separating Alternatives B, C and D and no varying degrees of application apparent anywhere except in the application of the wildlife threshold tradeoff.

Finally, a statement of what rules and regulations were followed in developing this plan should be included in the description of the planning process. We had difficulty finding out exactly what regulations were followed in preparation of this plan and we are still rather unclear on this point.

We thank you for the opportunity to comment and we hope you will take our suggestions into consideration when preparing your final plan.

Sincerely,


Becky Claytor
Dakota Resource Council
Staff

DAKOTA RESOURCE COUNCIL

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March 25, 1987

COMMENTS ON THE DRAFT NORTH DAKOTA RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT, BUREAU OF LAND MANAGEMENT

ALTERNATIVES

In formulating the different alternatives analyzed and compared in the RMP/EIS, different goals and objectives were not developed for each resource in each alternative. It would be extremely helpful to the public, as well as BLM, to develop these so the reader can compare them to the planning proposals.

A major deficiency of the document is the failure to clearly distinguish the alternatives. As a result, there is little difference among two or more in a number of particular instances. This deficiency is most glaring on the coal issue. The amount of acres acceptable for further consideration of coal leasing in Alternative C, the "balanced" alternative, is only 23,628 acres less -- or 4 percent -- than the amount in Alternative B, the maximized production alternative. (See Appendix G.) It appears that this problem is caused by framing the themes for Alternatives B, C, and D with a bias that is heavily weighted toward maximizing production. The themes are compared below:

Alternative B: "Maximizing commodity resource production." (p. 15)

Alternative C: "Maximize production of mineral resources . . . Along with these goals, all actions are to protect high resource values as determined by BLM." (p. 16)

Alternative D: The protection of amenity values is favored over potentially conflicting uses or actions such as the development of mineral resources. . . ." (p. 19)

The reasoned range of choices and alternatives required by NEPA and BLM's policies cannot be fulfilled when a planning effort is driven by such a narrow casting of the alternatives. We recommend that the alternatives be redefined and broadened and the multiple-use tradeoffs be similarly expanded.

MULTIPLE-USE TRADEOFFS AND THRESHOLDS

In Appendix D the RMP/EIS describes eight issues used in the tradeoff analysis, including one threshold issue. Most of these choices are reasonable and well supported by the material in the body of the document and respond to problems identified in BLM's previous planning efforts. For example, the OTA report criticized BLM's failure to establish buffer zones around Minuteman missile sites and to exclude producing oil and gas fields (OTA, p. 90). This has been corrected by including issues Nos. 1 and 6 in this planning document (p. 111).

In the 1986 Secretarial Issue Document on the coal program, the decision was

made to reject six additions to the lands unsuitable criteria that had been strongly recommended by other agencies, the OPA, and public interest groups. In rejecting these as additions to the LUC, however, the Secretary did pledge that BLM planners would give "increased emphasis" to these items in the multiple-use analysis phase of land use planning (Decision Sheet DS-3). The six proposals were wetlands, riparian habitat, lands adjacent to air quality class I areas, sole-source aquifers, reclamation, and lands contiguous to National Park Service units.

Although a wetlands tradeoff is made for Alternative A, none of the six appear to be clearly and fully addressed in the B, C, and D Alternatives analyzed for this RMP. Thus, we are concerned that the Secretary's pledge has not been fulfilled. (See Tables D-2-D-5.) Without specific information addressing these points, the public lacks sufficient information to weigh BLM's performance or to make constructive comments.

Other parts of the document do address some aspects of these six issues. The RMP states on p. 11 that an extensive inventory of riparian habitat is available to BLM. Although wetlands and riparian habitat are not always identical areas, they do overlap; apparently BLM is equipped to directly address protection of many wetlands through the multiple-use screens.

On p. 131, Appendix H, (Generic Mine Scenario) it is stated that the ability to reclaim woody draws "has not been demonstrated" and mining them would be "a long-term significant negative impact." The multiple-use tradeoffs should explicitly screen out all woody draws. So far as we can determine, all woody draws have not been excluded.

We question the proposal to limit issue No. 8 to protecting buried-valley aquifers only under Alternative D. On page 39, it is stated that these aquifers provide good quality water that is easily obtained because they are shallow. Including this issue in Alternative C would provide a more equitable "balance of multiple uses" in accordance with the theme stated for C on p. 13. (Also see previous discussion of Alternatives and the need for a broader range of management proposals.)

Issue No. 5 raises some extremely important concerns for DRC. Our members have repeatedly testified that prevention of erosion is a critical reclamation issue. (See DRC Comments on Scoping, April 10, 1985.) Moreover, erosion from mined lands affects not only the mine site itself but damages adjacent lands and, if severe, can destroy their productivity. First, we are unclear whether the slope percentages proposed apply to all areas or only to areas above a certain acreage size. In discussions with the planning staff, they implied that "small" areas would be exempted from this limitation although no cut-off is proposed in the RMP.

Discussions with the planning staff confirmed that their perception is the 30% slope limit does not present an effective protection because the mining industry does not want to deal with all the planning and impact problems such slopes pose and few if any steep slopes have been mined in North Dakota. As noted elsewhere in these comments, the alternatives are not well differentiated. Issue No. 5 presents an opportunity to help correct that

problem by increasing the spread between alternatives. Thus, we propose that the following percentages be used:

Alternative A: 30 %
Alternative B: 0 %
Alternative C: 20 %
Alternative D: 15 %

We commend BLM for making high value wildlife values a threshold in Appendix D, Issue No. 4. We have long encouraged BLM to make use of its powers to set thresholds and believe they are essential to achieve responsible land use plans. Table D-1 needs to be clarified so that the column headings are keyed to the text on page 111. The text should be expanded to fully explain how the threshold was determined and how it will be used. Until those changes are made, we cannot determine the effects of this proposal or make substantive comments on it. For example, the column heading entitled "portion excluded" appears to be the threshold percentage but is not labeled as such and, as written, the threshold appears to be less than 1 percent for all Coal Study Areas. The relationship between Issue No. 4 and Appendix F is confusing.

DATA ADEQUACY

Another serious criticism raised by OPA, DRC and many other reviewers of BLM's previous planning efforts and the 1986 supplemental EIS was the lack of inadequate data in land use plans and coal activity planning. (See, e.g., OPA, p. 74 ff.) The purpose of data requirements in BLM planning regulations and CEQ regulations is to ensure that appropriate data is obtained and incorporated into the interdisciplinary planning approach prescribed by the Federal Land Planning and Management Act and the National Environmental Policy Act, as well as to inform the public and assist informed participation and comment.

If public credibility is to be restored to BLM planning, it is essential that RMPs explicitly address two aspects of data adequacy: First, BLM's own assessment of data needs and the sufficiency of information used to support the agency's conclusions. This aspect would probably best be covered in a brief, separate section in the RMP that included a list of the types of data BLM found to be sufficient and insufficient.

Second, BLM should inform the public as to the data used in performing the RMP analyses and making assumptions. For example, on page 107, it is stated that BLM used information collected by agencies, industry, and the public in applying the coal development screen. These sources are not cited nor is their quality evaluated. The aggregate of coal acreage identified in this RMP (Table 3-4, p. 32) is substantially larger than in previous planning efforts. Regardless of the fact that the coal screen criteria in this RMP differ from those used in previous plans, the obvious question is how solid are the supporting data? The references should be provided so members of the public can, if desired, make an independent evaluation of the quality of the data sources. A second example occurs on p. 130, Appendix H, (Generic Mine Scenario) where an assumption is made on reclamation. It states that

reclamation research indicates "optimism is justified" for reclamation to agricultural production. No citations are given. We also suggest a full explanation be given in both the text and appendix of the differences in coal screen criteria now used and previously used.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

The law (FIPWA) charges BLM to give priority to the identification, designation, protection, and management of ACECs (43 CFR 1601.8(c)). Three areas nominated for ACEC status are discussed on page 8 of the RMP. Yet, the RMP does not state whether it proposes to designate these areas and how it will manage them to protect their "outstanding resource values." It merely suggests that the management or ownership be transferred to some other entity and does not state how BLM will preserve "the identified values." Is BLM saying that these areas do not meet the criteria for ACECs? If so, the rationale and supporting analyses must be presented.

MANAGEMENT GUIDANCE

Beginning on page 8, the RMP describes the management guidance common to all alternatives that are derived from 1) acceptable decisions from past planning efforts, 2) decisions that have been analyzed through specific documents, 3) policies dealing with nonissue resources, 4) nondiscretionary decisions, and 5) necessary to protect past investments. The discussions in this section do not distinguish between these five categories, particularly Nos. 1, 2, and 5 and the reader is left to guess which categories apply to many specific guidance items. We recommend that a table be added to the section that shows which categories apply to each item.

AIR QUALITY

Air quality is a major concern in North Dakota and we have submitted extensive comments on its importance to the public's health and economic well-being and the failure of BLM's past planning and leasing efforts to properly address this issue. (See, for example, DRC Comments on Scoping for this RMP, April 10, 1985.) Although air quality issues are admittedly complex and difficult to describe succinctly, the discussions of air quality issues and impacts in the RMP are confusing and often appear contradictory.

Page 134, Appendix I, states that in 1979 the NDSHP found the allowable increment for Class I SO₂ deterioration had been consumed and that this decision implied that no additional sources could construct and operate within a corridor bounded by Theodore Roosevelt National Park eastward. Page 31 states no SO₂ state or federal standards were exceeded at the Park monitoring station. Page 32 states USDI's Fort Union EIS found that consumption of the increment "could have occurred" over the Park. These statements are confusing and appear contradictory.

Page 129, Appendix H, states that a new mine would consume the allowable Class II PSD increments for particulates, thus "any associated PSD source could not contribute significantly" to PSD Class II annual or 24-hour particulate increments, which are expressed in micrograms per cubic meter. Page 31 states

that "local sampling near coalmines may show exceedances of the AAQS and possible consumption" of the PSD increment. Page 134, Appendix I, states a lignite-fired facility would emit about 375 pounds of particulates per hour. This is confusing in the extreme. Is the RMP contending that its generic facility will not contribute significantly? Has local sampling near coal mines actually been done? If so, what are the findings? Is BLM proposing to have local sampling done? For the purposes of analysis, BLM must make some assumptions regarding type and effectiveness of control technologies used by the generic facility, what are these? How do emissions of 375 pounds per hour translate into micrograms per cubic meter?

The RMP makes clear that numerous and serious conflicts have arisen between protection of air quality and coal and oil and gas developments, but the document does not contain any explicit recognition of air quality issues in its specific management proposals and alternatives. What steps will BLM take to ensure that air quality will not be further degraded?

We propose an air quality multiple-use tradeoff be added for both Alternatives C and D regarding both coal and oil and gas.

GROUND WATER

Criterion 17 in appendix C states that there were no areas identified as unsuitable under the municipal watershed designation. However, under the multiple-use tradeoffs, each alternative has a designation for municipal watersheds in order to protect Dickinson's water resource. If the municipal watershed identified under criterion 17 is to be a specific designation it should be noted as such in the plan.

Descriptions of aquifer formations found in North Dakota are given on page 39. You state that "Most rural and municipal water users in North Dakota depend on ground water for their domestic water source." You do not, however, state to what extent each of these aquifers would be affected due to coal mining.

In your generic mine scenario you say that the quality of groundwater will be affected by mining. Water quality of spoils will be different than aquifers prior to mining, significant quantities of leaching could occur within the affected mine area and may move through the groundwater system away from the mine. We think these are important considerations and should be sufficiently addressed.

There is minimum consideration given to effects on groundwater in this plan. Buried-valley aquifers are given some consideration under multiple-use in alternatives A and D and we feel they should also be included in your preferred alternative C. In addition, the effects of mining on all aquifer formations should be included in your final plan. Provisions should be made for all major aquifers determined to be adversely affected to be screened out.

RECLAMATION

Several items related to reclamation concerns have already been discussed in these comments such as woody draws, slopes, wetlands, and sources of data.

Several other items deserve comment.

20 The RMP relies on the Soil Conservation Service Land Capability Classes for determining post-mining productivity. We want to point out that these classes have limited applicability. They are drawn up for field crops and mechanical treatments associated with agriculture. They were intended for soils staying in place, not to address drastically disturbed areas, such as strip mines, that involve total removal, storage, and replacement of soils. With such drastic disturbance, some soils do not retain their original productivity levels on the post-mining area. Poor or badly timed handling can also cause loss.

21 While the RMP proposals do address one of the factors weighed in the Land Capability Classes -- slope -- they do not address other factors such as chemical and physical properties. Highly sodic soils do occur in the North Dakota coal fields, particularly in soils of the Rhoades series. These areas should be screened out from further consideration for coal leasing.

22 In a number of coal field counties, SCS has performed more specific county soil surveys. Where these are completed, BLM should use them in preference to the more general and county surveys referenced in the RMP (p. 35). Although BLM's concern for consistency is understandable, it seems unproductive to forego using better information for the sake of achieving consistency.

23 Prime farmlands, under the definition of SMCRRA, do exist in some areas of the coal fields but they are not mentioned in the RMP, nor are the special issues they present addressed in the proposals. This should be remedied. We have learned that SCS has mapped these areas.

24 Appendix H states that BLM is optimistic that mined lands can be restored to "agricultural production" (p. 130). We have pointed out in previous comments on land use plans and leasing programs that no studies have been done on the ability of reclaimed lands to sustain pre-mining production levels over the long-term or through a drought cycle. We have also pointed out that no lands have yet been found to have achieved successful reclamation under the terms of SMCRRA. Re-establishment of woody plants and native prairies have proved especially troublesome. We ask that these concerns be addressed more fully in the final RMP.

25 In addition, the paragraph on page 130 about "native-type" range appears incomplete or contradictory. If introduced species are allowed to remain in the post-mining land use, then native range has not been re-established.

SURFACE OWNER CONSULTATION

26 In appendix E there are two tables, one showing the results of BLM's surface owner consultation survey and the other showing the amount of acreage excluded in each CSA due to significant surface owner opposition. What is missing is an explanation of how this screen affects each area under consideration for coal leasing and how, in fact, an "area" was defined. Subjective decisions seem to have been made in using the decision factors to arbitrarily drop acreage from leasing. While we doubt this was an arbitrary decision, it is

- 6 -

difficult to analyze it when this information is missing.

In regards to the decision factors themselves, DRC has submitted numerous comments in the past regarding determination of significant surface owner opposition and once again we would like to reiterate our concerns.

1. We feel an area should be defined as a continuous block of locally significant federal coal. BLM does not have the responsibility of managing private and state minerals. When determining significant opposition to federal leasing in an area, the agency should only be concerned with federal minerals.

2. The application of the surface owner consultation screen should be made without regard for the leased status of adjacent state or private coal or land.

3. Table E-1 shows that 43% of the total number of landowners under previous consent agreements responded that they were opposed to leasing. DRC feels that this is a significant number of people. BLM regulations should be clarified to allow surface owners who have already signed a lease to be counted in the determination of significant opposition, if they express opposition to federal coal development.

28 In some instances surface owners were not even consulted. This is in reference to the surface owners in the McKenzie-Williams and Southwest North Dakota areas for which MFP's were done three and four years ago. You state on page 117 that "Surface owners were not recontacted . . . because the views expressed during the preparation of these plans were considered up-to-date." There have been many changes in state and federal rules regarding surface mining in the past few years. We would imagine that many changes in attitudes toward coal leasing could have occurred in the same amount of time. In addition, surface leases have been dropped in the past few years, many of these over federal coal. In any case, this could affect the number of people who might respond opposed to coal leasing who would have been counted in favor of leasing in the past because of existing surface leases.

If this RMP is to be considered complete and sufficient, surface owners in all areas covered by the RMP should be consulted. Otherwise, decisions on whether to lease are being made using outdated and insufficient information.

ENVIRONMENTAL CONSEQUENCES

29 This section of the report fails to analyze the cumulative effects of some consequences that are of high public concern. Specifically, socio-economic consequences identified with mining and end use facilities. This is addressed in all the alternatives, but from only one generic mine and facility. The destructive effects of boom and bust swings are not described in the body of the RMP, despite the fact that western North Dakota communities have experienced severe dislocations.

- 7 -

Much more detailed and updated studies could have been done regarding economic impacts. On page 137 and 138 you examine the amount of revenue and source of revenue coming back to a county from a mine and end use facility. We are led to believe that the data used for this analysis is outdated due to the fact that North Dakota has no local property tax on mines. You also state that, "With minor exceptions, these taxes are distributed to the county in which the mine and facility are located. . . ." Currently North Dakota law only allows for 20% of the revenue generated from the coal severance tax to go directly back to the county. Other funds go back to the county by way of the energy impact office, however these funds are discretionary and even at this time there is legislation that would either eliminate the source of this revenue or divert it to the state general fund. Economic impacts are not adequately analyzed in this section and should be a major consideration when determining whether land should be leased.

On page 140, Appendix I, losses to farm and ranch operations are stated to be \$138,600 annually from the generic mine and facility. No cumulative assessments are made nor is any evaluation made for reductions or losses in productivity due to off-site impacts such as air pollution, water pollution, and decreased well yields.

LANDS UNSUITABLE ANALYSIS

Unfortunately, an apparent quest for brevity on this issue has left us in the dark. Substantive comments are difficult to make without more information about the process used for the unsuitable analysis described in Appendix C. When was the analysis performed? Will exceptions and exemptions be applied at the tract selection phase of coal leasing? How do the lands identified in Appendix F as acceptable with stipulations relate to both the unsuitability criteria and the multiple-use tradeoff screens?

ORGANIZATION OF THE RMP

Many issues are difficult to track through the RMP from formulation to description to management proposals. In these comments we have pointed out just a few of many examples where one section does not correspond with another, such as a conclusion reached in the text is not explicitly dealt with in the management proposals. For example, woody draws can't be reclaimed but are not used explicitly in the screens; air quality concerns are ignored in the multiple use screens. We recommend that each item be carefully followed throughout the document so that the public can determine what BLM is proposing, what has been done, and what will be done.

The failure to include maps with information on specific resource values makes it very hard for the public to fully participate. We urge that such maps be included in the final. While the maps provided are good, they exclude such basic information as the National Park boundaries, locations of air monitoring stations and other features mentioned in the text. While it is impractical to map all the resources at a reasonable cost, it is even more impractical to require members of the public to work with so little graphic information on resources or to travel to the BLM office during its office hours for a look at the maps.

CONCLUSION

There is a need for clarification in many areas of this RMP and we hope that the concerns we mentioned in the above comments will be given consideration in the final plan.

With regards to the four alternatives:

Three of the coal screens apply to the four alternatives equally, and if applied correctly and fairly will yield the same results. The area in which BLM has to differentiate in the alternatives is under the multiple-use tradeoffs. There is so little differentiation that it is difficult to say whether or not we have alternatives. Our biggest concern is that if the preferred alternative, C, is supposed to be a balance between commodity production and protection of amenity resources that multiple-use tradeoffs be designed with these goals in mind. Below are multiple-use tradeoffs that we feel would make better defined alternatives.

-Buried valley aquifers need to be included in Alternative C. In addition, a tradeoff should be established for other major aquifers under Alternative D.

-Consideration needs to be given to prime farmlands as designated by the Soil Conservation Service under Alternatives C and D

-A tradeoff should be added for both Alternatives C and D regarding air quality in both coal and oil and gas development. Acceptable levels should be established under each alternative.

-In addition to the slope percentages stated previously in these comments, other areas should be screened out due to difficulty in reclamation. All woody draws should be screened out under Alternatives C and D.



Chevron USA Inc.
6400 South Fiddler's Green Circle, Englewood, CO 80111, P.O. Box 599, Denver, CO 80201

M. M. (Lisa) Flesche
Staff Analyst
Legislative and Regulatory Affairs

March 24, 1987

North Dakota BLM
Draft Resource Management Plan and EIS

Mr. Mark Stiles, Project Manager
Dickinson District Office,
Bureau of Land Management
P.O. Box 229
Dickinson, ND 58602

Dear Mr. Stiles:

Chevron U.S.A. Inc. believes that overall, you did a commendable job of preparing the draft North Dakota RMP and EIS. Your discussions of oil and gas activities in Chapters 3 and 4 were succinct and germane. We support your selection of Alternative C as the preferred alternative, since it would allow the continuation of oil and gas activities subject to reasonable safeguards. However, there are a couple of serious problems that we would like to address.

One major concern with the draft is that you assert that you have the authority to place special stipulations on split-estate lands, where the surface is privately owned and the subsurface is federal. The BLM does not have the legal right to control uses by such surface owners. If the private surface owner and the BLM voluntarily enter into an agreement regarding surface activities, that's fine. But the BLM cannot unilaterally impose special lease stipulations on split-estate lands. To do so would be to infringe upon the private property owners' rights.

Second, we are confounded by your assertion on page 141 that North Dakota is not subject to the withdrawal review requirements of FLPMA's Section 204 (43 U.S.C. § 1714). Every state containing BLM withdrawals is subject to FLPMA.

Third, Chevron is opposed to the special stipulation on page 146 regarding the Fort Union Historic Site. Though we realize that exceptions may be granted to this stipulation, we believe that it is contrary to the Secretary of Interior's mandate under FLPMA (43 U.S.C. § 1732), which directs that all public lands shall be managed for multiple use unless such lands have been dedicated to specific uses under another law.

We realize that the purpose of this 3.5 mile radius area is to protect scenic values which could be affected by oil and gas activities. However, there are many ways to minimize visual impacts without having to resort to prohibiting surface occupancy. Drilling activities are only a temporary intrusion upon the surface resources. With all of the reclamation methods available today there are no long term visual impacts from our activities.

Northern Region - Exploration, Land and Production

Mr. Mark Stiles

-2-

March 24, 1987

In Section 504 of the 1984 Wyoming Wilderness Act, Congress stated its intention regarding how lands adjacent to wilderness areas are to be managed:

Sec. 504. Congress does not intend that the designation of wilderness areas in the State of Wyoming lead to the creation of protective perimeters or buffer zones around each wilderness area. The fact that nonwilderness activities or uses can be seen or heard from within any wilderness area shall not, of itself, preclude such activities or uses up to the boundary of the wilderness area.

If Congress feels that nonwilderness activities can take place up to the edge of wilderness areas, then undoubtedly such activities should be allowed up to the edge of historic sites.

Finally, Chevron believes that your document would be clearer and improved if the maps of the four alternatives as well as the chart on page 19 would show which/how much acreage is subject to a NSO stipulation separate and apart from that acreage that is subject to seasonal restrictions.

Thank you for the consideration of our views.

Sincerely yours,

Lisa Flesche
M. M. Flesche

MMF:js

March 23, 1987

Mr. Mark Stiles
Project Manager
Dickinson District Office
Bureau of Land Management
P.O. Box 1229
Dickinson, ND 58601

Dear Mr. Stiles:

I am writing to demonstrate my support of the exclusion of the KPF quarries from surface mining as indicated in the North Dakota Resource Management Plan and Environment Impact Statement. The Flint quarries are a unique and valuable resource and their destruction would be regrettable, to say the least. I appreciate your understanding of the intricacies of this issue.

Sincerely,

Jeani L. Borchert

Jeani L. Borchert
P.O. Box 975
Belfield, ND 58622

March 23, 1987

Mr. Mark Stiles
Project Manager
Dickinson District Office
Bureau of Land Management
P.O. Box 1229
Dickinson, ND 58601

Dear Mr. Stiles:

I am writing on behalf of the Professional Council for North Dakota Heritage concerning the Draft North Dakota Resource Management Plan and Environmental Impact Statement (1986). The Professional Council for North Dakota Heritage (PCNDH) is an organization of professional archeologists, historians, and cultural resource managers. One of the goals of the PCNDH is to "initiate responsible action to conserve and preserve archeological and historical resources in North Dakota". With this goal in mind, the PCNDH would like to voice support of the Draft RMP/EIS which excludes the Knife River Flint National Register District from future federal coal leasing.

The Knife River Flint Quarries have long been recognized as an extremely significant cultural resource of immeasurable scientific and educational value. The Draft RMP/EIS is to be applauded for excluding mining of Federal coal in this unique but relatively limited area. Preservation of the Flint Quarries will ensure the conservation of an archeological record which spans over 10,000 years of human endeavor.

Once again, the PCNDH supports and urges the adoption of the Draft RMP/EIS.

Sincerely,

David D. Kuehn

David D. Kuehn
President
Professional Council for North Dakota Heritage
P.O. Box 669
Belfield, ND 58622



NORTH DAKOTA
STATE DEPARTMENT OF HEALTH
State Capitol
Bismarck, North Dakota 58505

ENVIRONMENTAL HEALTH SECTION

February 23, 1987

1200 Missouri Avenue
Box 5520
Bismarck, North Dakota 58502-5520

Mr. Mark Stiles
First District Office
Bureau of Land Management
P.O. Box 1229
Dickinson, ND 58602

Dear Mr. Stiles:

The North Dakota State Department of Health appreciates the opportunity to comment on the draft "North Dakota Resource Management Plan and Environmental Impact Statement." Provided are comments pertaining to the air quality sections of the report. In general, we feel that clarification of a number of items is necessary for the final document.

Should you have any questions concerning this matter, please contact myself or Mr. Dana Mount, Division of Environmental Engineering.

Sincerely,

Gene A. Christianson
Gene A. Christianson, Chief
Environmental Health Section

GAC/MD:saj
Encl:

Environmental Enforcement 701-224-3234	Environmental Engineering 701-224-2348	Hazardous Waste Management & Special Studies 701-224-2366	Water Supply & Pollution Control 701-224-2354
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Comments on "North Dakota Resource Management Plan and
Environmental Impact Statement"

Submitted by the North Dakota State Department of Health
Environmental Health Section

Page 8, paragraph 1 under Air Quality

- The statement "Should analysis show the potential for any ... for their permit review" indicates that analysis will be performed, but does not delineate the specific analysis to be used. For example, will modeling analysis consistent with EPA and State guidelines be performed? Will compliance analysis be applied to every new well or to the entire field? The procedures used in the analysis should be explicitly defined.

37

Page 29

- In paragraph 1 under Air Quality the statement indicates Violations of National Ambient Air Quality Standards have occurred in the Williston Basin. Because the Williston Basin is associated with oil/gas production the statement infers the National Ambient Standard for SO₂ has been violated which is not the case. The data provided in Table 3-1 do not indicate any exceedances of the National AAQS.

38

- In paragraph 8, agricultural activity must be considered an important source of TSP.

- In paragraph 9, the statement "Comparison between the monitoring site results and the AAQS (Table 3-2) indicates violations of those standards" should indicate the specific standards being discussed.

Page 31, Table 3-1

- Parentheses should be placed around "SO₂" under the Pollutant heading.

- "Long Butte" should read "Lone Butte" under the Location heading.

- The second observation under "3-hr Maximum Concentration" for SO₂ at TRNP-N should be 78, not 92.

- The first observation under "24-hr Maximum Concentration" for SO₂ at TRNP-N should be 41, not 78.

- The heading for the last column on the far right under the pollutant "Total Suspended Particulates (TSP)" is missing.

39

- The H₂S data are presented as 1-hr concentrations yet data collected by the Health Department are 1/2-hr averages. This should be clarified.

Page 31, Table 3-2

- For the pollutant sulfur dioxide, the 1-hr North Dakota Standard should read "715 $\mu\text{g}/\text{m}^3$ 1-hr average not to be exceeded."
- For the pollutant sulfur dioxide, the Federal Secondary Standard should read "1300 $\mu\text{g}/\text{m}^3$ 3-hr average."
- For the pollutant nitrogen dioxide, the North Dakota 1-hr Standard should read "200 $\mu\text{g}/\text{m}^3$ 1-hr average not to be exceeded more than 1% of the time in any 3-month period."
- For the pollutant hydrogen sulfide, the 75 $\mu\text{g}/\text{m}^3$ North Dakota Standard should read "75 $\mu\text{g}/\text{m}^3$ 1/2-hr average not to be exceeded over twice per year."

Page 31

- The sentence "Standards apply only to or general public." in paragraph 1 is incorrect. Standards apply only to areas outside the controlled property of a given facility.
- The last sentence of paragraph 3 should indicate that the 24-hr State standard was exceeded.
- The first sentence of paragraph 4 should indicate that no State or Federal SO₂ standards were exceeded. Also, the use of the term "percentages" in the last sentence may be incorrect.
- The last sentence in paragraph 5 is true for TRNP-N and per-naps Dunn Center, but inappropriate for Lone Butte. Health Department data indicates that moderate wind speeds at Lone Butte (~15 mph) were associated with the highest measured SO₂ concentrations.
- The first sentence of paragraph 6 should indicate the North Unit of Theodore Roosevelt National Park.
- It should be noted in the text of paragraph 6 that the State H₂S standards are welfare standards, not health standards.
- In paragraph 7 it would be best to reference the 45 $\mu\text{g}/\text{m}^3$ standard for H₂S.

- 2 -

Page 32

- With respect to the first paragraph, the Lostwood National Wilderness Area is a Class I area, not Lostwood National Wildlife Refuge.
- The North Dakota Class II PSD 24-hr increment for particulates in Table 3-3 should be 37, not 30.
- The first sentence in paragraph 2 does not indicate the pollutant (i.e., SO₂, TSP) being discussed.
- The air quality (modeling?) study discussed in the last sentence of paragraph 4 indicated that the problem wells were located outside of the Bear Den and Croff Fields, not in these fields. Also, the emission data used in the referenced study was severely overestimated. Due to the exaggerated emission levels the predicted exceedances are not realistic.
- Perhaps some reorganization is necessary for the Air Quality Section pages 29-32. There is a separate section for Total Suspended Particulates, but not for the other pollutants. Also, the SO₂ PSD discussion is provided under the Total Suspended Particulates section.
- Citations should be given as to the sources of the ambient air quality data.

Pages 55, 65, 74, and 84

- Paragraph 3 of the Air Quality sections on these pages contains the statement "Prior to any leasing of Federal coal a detailed site-specific analysis of potential air quality impacts will be conducted." A discussion of the specific analysis should be provided.
- The background concentration for a pollutant under the PSD process does not consume any of the allowable increment. Therefore, the modeling analysis showed that 6.2 $\mu\text{g}/\text{m}^3$ of an allowable increment of 19 $\mu\text{g}/\text{m}^3$ was consumed.
- Please indicate the source (citation) for a background 24-hr TSP concentration of 100 $\mu\text{g}/\text{m}^3$. Typical TSP concentrations at rural locations in North Dakota for 24-hrs range from 15 - 50 $\mu\text{g}/\text{m}^3$.

Page 129, Paragraph 3

- 3 -

Dear Mr. Stiles, 3-19-87
I am submitting these comments as
a director and representative of the McKenzie
County Energy and Taxation Association
which is an affiliate of Dakota Resource
Council.

This group feels there has been, and
will continue to be, a decrease in the
quality of life for the people in western
North Dakota ever since the onset of
energy development. We concur there has
been economic gain for many people, cities,
and the state and this will continue
for many years. But in the scheme of
things in nature, it will be very short term.
Public land is experiencing degradation
at an increasing pace from energy exploitation.
Animal and plant populations have suffered
tremendously in large areas now scarred by
roads and trails and tank batteries. The
destruction of hardwood draws is shameful.
We urge the BLM to take every safe-
guard of the public land in your care for
the benefit of future generations. We support
Alternative D in the Plan.

Sincerely,
Dennis E. Johnson
RPO Box 72
Watford City, ND 58054

Cherie E. Haury
916 Belmont Road
Grand Forks, ND
58201

March 20, 1987

Mr. Mark Stiles, RMP Project Manager
Bureau of Land Management
Dickinson District Office
P.O. Box 1229
Dickinson, ND 58602-1229

Dear Mr. Stiles:

I have recently had the opportunity to examine the RESOURCE
MANAGEMENT PLAN ENVIRONMENTAL IMPACT STATEMENT for North Dakota (December
1986). I was pleased to see that this document expresses a recognition and
concern for protecting North Dakota's important cultural resources. Both
prehistoric and historic cultural resources are unique and irreplaceable.
These sites are an important part of the heritage of both the Native
Americans and Euro-Americans of North Dakota and hold a great deal of
potential for teaching us about our history and cultural processes and
development. It is very important that these sites be preserved out of
respect for this heritage and the cultures associated with them and that we
take the opportunity to learn what we can about the cultures which are part
of the structure of our present.

I believe that the most important portion of this resource management
plan is the decision to remove the National Register eligible Knife River
Plint Quarry district from future consideration for coal leasing. I
realize that this is a very large district and that there has probably been
a great deal of pressure to exploit the potential energy resources within
the area. I cannot emphasize how strongly I support this decision. The
KRP Quarry sites were a pivotal part of a vast continental trade and
technological network. The extent and extreme age of these quarries has
been documented recently. This recent research has served to indicate how
much we can learn from these sites concerning the prehistory of North
Dakota and prehistoric technology and trade on a continental scale.

In making this resource use tradeoff decision the BLM has demonstrated
a strong sense of responsibility toward all of the aspects of the land
under its administration. I hope that the BLM continues to act to balance
all of its responsibilities in this way.

Sincerely,
Cherie E. Haury
Cherie E. Haury



United States
Department of
Agriculture

Forest
Service

Medora
Packer
District

Route 6 Box 131B
Dickinson ND
58601

Reply to: 2620

Date: March 20, 1987

Bureau of Land Management
ATTN: Bill Trech
Dickinson District Office
P.O. Box 1229
Dickinson, ND 58602-1229

Dear Bill:

I am writing in response to your draft EIS/RMP of the Dickinson District lands in North Dakota. Since your planning effort basically excludes the Little Missouri National Grassland I can't really find much to comment on that would effect lands administered by the Forest Service. Your treatment of Federal minerals as it relates to leasing and development under our surface appears to be compatible with management direction in our soon to be released Forest Plan.

One item I did find was an apparent typo on page 22 where it is stated that 34,663 acres of public land would be disposed of under Alternative C. I assume the correct figure is 24,563 since BLM only has about 67,000 surface acres statewide.

The other item I would like to address is the section of land Section 10, T41N, R101W in Burleigh County. This section is within our administrative boundary and was apparently overlooked when the various scattered tracts of 20 lands within the boundary were originally transferred to Forest Service jurisdiction. This section is identified for disposal in our RMP and since it is the only parcel of BLM acreage within our boundary it would seem to make sense to transfer it to Forest Service administration. About 2/3 of this section is already within grazing allotments administered by the Forest Service and the Medora Grazing Association. The remainder is apparently in a private allocation assigned to another member of the Association who has other Forest Service land in nearby allotments.

Aside from the preceding two items, I feel the Draft RMP address the issues well and the preferred alternative strikes a reasonable balance between commodity and amenity values. I appreciate the opportunity to comment.

Sincerely,

WILLIAM W. FARNHAM
District Ranger

cc: S.O.

FS-6000-28/7-82)



U N I V E R S I T Y O F N O R T H D A K O T A

ANTHROPOLOGY
BOX 8254 UNIVERSITY STATION
GRAND FORKS, NORTH DAKOTA 58202
(701) 777-3008

March 22, 1987

Mr. Mark Stiles, Project Manager
Dickinson District Office
Bureau of Land Management
P. O. Box 1229
Dickinson, ND 58602

Dear Mr. Stiles:

I am writing to comment on the draft document entitled North Dakota Resource Management Plan and Environmental Impact Statement (RMP/EIS) produced by the Dickinson District Office of the Bureau of Land Management (BLM).

I am an archeologist by profession, and for that reason, I will confine my comments largely to matters in the document which concern cultural resources. The basis for my comments comes from more than a decade of experience in the archeology of North Dakota and, particularly, from five years of archeological studies in the Knife River Flint Primary Source Area in Dunn and Mercer counties, North Dakota.

I see several very positive aspects to the RMP/EIS regarding the proposed treatment of cultural resources. Under the discussion of General Management Guidance on page 9, an important point is made regarding the treatment of cultural resources. The BLM will require full assessment of cultural resources, including compliance with NEPA, on a development site-by-development site basis, prior to lease offering. This implies that, at a minimum, the BLM will expect cultural resource inventories and NHP evaluations to have been completed prior to lease offerings. This would appear to be sound management policy which affords cultural resources necessary consideration at an appropriately early stage in the site development process.

Another very positive aspect of the document is the explicit presentation of the four goals on page 12 concerning the BLM's management of cultural resources. These stated goals make it clear that the BLM has and will continue to make a strong commitment to the preservation and proper management of significant cultural resources overlying federal coal or on lands potentially affected by other BLM management procedures.

Perhaps the most significant management decision presented in the document is the decision to apply the multiple resource tradeoff process to federal coal which lies within the Knife River Flint Quarry National Register District (KRF District) and, as a result of this process, to withhold from leasing all federal coal underlying lands within the KRF District. I strongly support this decision. This is a very sound management decision which is grounded in a good understanding of the wide array of new data which has recently become available concerning archeological sites both within the KRF District and outside the KRF District. This decision seems clearly based on the view that the cultural resources within that KRF District are of regional and national significance

Mr. Mark Stiles
March 22, 1987
page 2

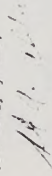
and that the KRF District, as a unit, is qualitatively distinct from any other definable land tract of similar size in North Dakota. I share and support this view. A great deal of scientific inventory and evaluative data are now available which support this decision by the BLM. I feel that it is extremely important and appropriate that the BLM has made this management decision regarding the KRF District at this time, in the context of this long-range planning document, rather than at a later date and in another context. The presentation of this decision as an integral part of all three new management plans (Alternatives B, C, and D) speaks well of the awareness of the BLM staff regarding up-to-date cultural resource information as well as the solidness of their commitment to the four general cultural resource management goals stated on page 12.

One further comment I can offer is that I would suggest greater attention be given to indirect impacts from coal leasing and mine development. Several types of indirect impacts to cultural resources are mentioned on pp. 132 and 133 in Appendices H and I. I would suggest that the greatest indirect impact could potentially be the complete destruction of regionally or nationally significant cultural resources through building construction, road construction, gravel mining, and related developments which would occur on lands outside the direct mine area as a spin-off from mine development. If not mitigated in some manner, such indirect impacts could be potentially as destructive of spatially concentrated resources in areas such as the KRF District as would actual mining. I would suggest that the BLM should consider means for mitigating such destructive indirect impacts, particularly for known nationally significant areas such as the KRF District, through implementation of appropriate "stipulations" in the lease agreements for specific coal tracts. An example of such a stipulation might be to require that the developer work with appropriate county officials and community planners to develop zoning regulations which will serve to identify and protect regionally and nationally significant cultural resources from undue destruction in indirect impact/development areas.

Overall, I think the draft RMP/EIS is a very well conceived, well organized, and well written document. It spells out in lucid terms the cultural resource management concerns and goals of the BLM within the state of North Dakota. It demonstrates a commitment to those goals through the judicious but appropriate use of the multiple resource tradeoff process applied to acknowledged, nationally significant cultural resources such as the KRF District and Writing Rock State Historic Site.

Thank you for the opportunity to comment on this document.

Sincerely yours,



Stanley A. Ahler
Associate Professor

Department of Anthropology
P.O. Box 8254-University Station
Grand Forks, ND 58202

March 22, 1987

Mark Stiles
RMP Project Manager
Bureau of Land Management
Dickinson District Office
P.O. Box 1229
Dickinson, ND 58602-1229

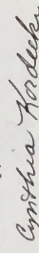
Dear Mr. Stiles,

Although I have not had the opportunity to see a copy of the BLM Resource Management Plan/Environmental Impact Statement, I understand that a decision has been made to drop the Knife River Flint Quarry Area from further consideration for coal leasing. Professionally and personally concerned with the archeological resource of North Dakota, I commend this decision.

I look forward to scrutinizing the Resource Management Plan/Environmental Impact Statement as it becomes available to me.

Thank you.

Sincerely,



Cynthia Kordecki
Advanced Archeological Assistant

23 March 1987

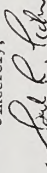
Mr. Mark Stiles, RMP Project Manager
Bureau of Land Management
Dickinson District Office
P.O. Box 1229
Dickinson, ND 58602

Dear Mr. Stiles,

In the interest of the protection of valuable and irreplaceable cultural resources I wish to offer my support for the removal of the Knife River flint district from future coal leasing considerations.

Thank you very much for your consideration on this matter.

Sincerely,



Paul R. Picha

23 March 1987

Mr. Mark Stiles, RMP Project Manager
Bureau of Land Management
Dickinson District Office
P.O. Box 1229
Dickinson, ND 58602

Dear Mr. Stiles,

I wish to offer my support for the removal of the Knife River flint district from future coal leasing considerations. This will aid in the protection of valuable and irreplaceable cultural resources.

Thank you for your consideration on this matter.

Sincerely,



Fern E. Swenson

Nokota

March 19, 1987

Mr. William F. Kretch
District Manager
BLM - Dickinson District Office
P. O. Box 1229
Dickinson, ND 58602

Re: Nokota's Comments Concerning BLM's Draft North
Dakota Regional Management Plan/Environmental
Impact Statement (RMP/EIS)

Dear Mr. Kretch:

Review of BLM's Draft North Dakota RMP/EIS indicates that Nokota's concerns transmitted to you on July 31, 1986, remain pertinent and unanswered. Therefore, said letter is hereby resubmitted within the official comment period and will constitute the major portion of our comments. Additional comments concerning BLM's Dunn Center Coal Study Area (CSA) follow.

Only a small portion of BLM's 228,060-acre Dunn Center CSA has any real development potential within the time frame this RMP will be in effect. Nokota and U.S. Bureau of Reclamation have been intensively studying a 19,680-acre area within the Dunn Center CSA since 1982 in conjunction with Nokota's Dunn-Nokota Methanol Project. The Final Environmental Impact Statement (EIS) for this area is scheduled for completion this summer, yet it is not clear if BLM has utilized this data within its macro-analysis of the Dunn Center CSA. For example, the Bureau of Reclamation's Draft EIS revealed no adverse impacts associated with mining within Section 8, T144N, R93W, yet BLM has proposed not to lease the federal coal within the north half under the Multiple Land Use screen. This is a major change, as this area was formerly available for federal coal leasing and was included within Nokota's February 23, 1984, expression of leasing interest. Unfortunately, the RMP is not specific enough to ascertain the reasonableness of BLM's action and it must, therefore, be disputed. Pending analysis comparable to the Bureau of Reclamation's studies, it is requested that this area be recommended for lease.

Nokota must also dispute the withdrawal of Section 10, T144N, R94W because of "significant landowner opposition." Nokota has control over about 75% of this section via two leases:

Lease #	Lease Date	Legal Description	Lessor
PCL-749	1/12/72	Sec. 10: S $\frac{1}{2}$	Geo. J. & Vina Schmidt
CL-507	1/16/71	Sec. 10: NW $\frac{1}{4}$	Firm B. Morse

It appears that BLM has maximized the size of the "significant landowner opposition" block by combining leased and unleased areas. While this could be justified if the leased areas were completely surrounded by unleased and/or opposed to mining leases, this is not the case for Section 10. Nokota has valid leases on the eastern and western flanks of Section 10 and, therefore, has mining access into this section. Given the above, it is inappropriate for BLM to withdraw this coal under "significant landowner opposition," and it should be reinstated.

BLM's "broad-brush" approach to the Dunn Center CSA is not appropriate within the area designated as Nokota's 25-Year Mine Study Area (enclosure). As mentioned earlier, this area represents less than 9% of BLM's Dunn Center CSA but has been intensively studied by Nokota, the U.S. Bureau of Reclamation and other interested parties. BLM's North Dakota RMP/EIS should maintain consistency with the results of the Bureau of Reclamation's upcoming Final EIS. Proposed deviations from the Bureau of Reclamation's recommendation should be justified on a section-by-section basis and should not be totaled together with similar areas within the larger Dunn Center CSA.

Nokota requests that all federal coal, except for unleased landowner opposition areas, within the 25-Year Mine Study Area be allowed to proceed into the EIS where projected impacts can be assessed.

Sincerely,

THE NOKOTA COMPANY

Ralph D. Bartz

Ralph D. Bartz
Manager
Technical Services, Mining
Enclosure

/vg Enclosures not reproduced.



July 31, 1986

Mr. William F. Krech
District Manager
BLM - Dickinson District Office
P. O. Box 1229
Dickinson, ND 58602

Dear Mr. Krech:

Thank you for taking the time to meet with members of the North Dakota Lignite Council on July 23, 1986, concerning the Bureau's North Dakota Regional Management Plan (RMP). As you are aware, The Nokota Company is the sponsor of the Dunn-Nokota Methanol Project and has submitted an expression of leasing interest in specific federal coal land within the Dunn Center tract containing approximately 2929.35 acres. Based upon your letter of June 20, 1986, to Mr. John Dwyer, comments exchanged during the meeting, and review of the Dunn Center proposed study map obtained from BLM, we have the following concerns:

Issue #1: Tract Size and Delineation

The map provided Nokota encompasses about 225,000 acres. A large majority of this area has minimal to no chance for development within the time frame the RMP will be in force. BLM's analysis of these massive study blocks is misleading and counterproductive to effective coal lease programs, as people wrongly assume the extent of development and that development projects can be sited anywhere within the large area. It also appears that the original Fort Union II study area has been increased by over 100,000 acres to encompass North American Coal Corporation's (NACCO) recently released Halliday tract. Nokota requests that the BLM prevent much confusion and waste of resources by:

1. Acknowledging Nokota's expression of leasing interest dated February 23, 1984, in specific federal coal lands containing approximately 2929.35 acres and recognizing that Nokota's development plans, like those of existing mine operators, are the result of years of study and regulatory review and are, therefore, very site-specific. The Department of Interior's EIS for the Dunn-Nokota Methanol Project is examining the impacts associated with these development plans, including the potential mining of coal within the 25-year mine study area. Nokota has no development plans for any other portion of the Dunn Center study area, including the area immediately north of SR 200.

56

57

The Nokota Company / 9999-44-4444-6666 P.O. Box 1633 Bemick, North Dakota 58502 701/223 6188

Mr. William F. Krech
July 31, 1986
Page 2

2. Providing basic information that would convey the degree of development potential within remaining areas. We would recommend that BLM add the overburden thickness contour lines to the D-seam (Beulah-Zap). It is suggested that the contour line intervals be set at 20 to 80 feet, 80 to 120, and 120 to 160. Overburden depths greater than 120 feet are not believed to be economically mineable in the foreseeable future.

58

3. Creating a Halliday tract which would include the recently dropped NACCO leases and subdividing the remaining area into smaller areas (see enclosure). Tracts should differentiate between areas subject to development plans on file with state and federal agencies and areas with no development plans. It is envisioned that many of these subtracts would be dropped because of lack of development interest and that they would not proceed into the EIS study phase. In addition, tract maps should record barriers to mine development (highways, railroads, coal croplines, major electrical transmission lines, unsuitable topography, etc.).

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Issue #2: Cultural Resource Areas

The BLM's reference to screening for "unacceptable environmental conflicts" implies that an arbitrary subjective determination on these issues will be made at BLM's discretion. The BLM does have discretionary powers under the third coal screen (Multiple Land Use), but this authority is granted only "...to protect other resource values of a locally important or unique nature not included in the unsuitability criteria discussed in paragraph (c) of this section." (43 CFR 3420.3, emphasis added) Cultural resources are specifically handled by the unsuitability criteria contained within 43 CFR 3461, Criterion 7, and, as such, do not fall under the discretionary third screen.

61

BLM's apparent belief that eligible sites that comply with the stringent unsuitability criteria contained within 43 CFR 3461 are best excluded from leasing, based upon use of the discretionary Multiple Land Use coal screen, appears to be based upon an imperfect understanding of the National Historic Preservation Act of 1966, as amended (NEPA).

NEPA, and particularly Section 106, specifically does not authorize BLM to "protect" eligible cultural resources by denial of coal leases; nor does the mere determination of

Mr. William F. Krech
July 31, 1986
Page 3

Eligibility authorize similar BLM actions, as the Keeper's "professional judgment" does not veto use of the property (January 29, 1982, letter to the Dickinson BLM from the Keeper).

The formal listing of an eligible district requires the consent of the private owner or the consent of a majority of such owners where more than one is involved. Such consent was overwhelmingly denied for the KRF eligible district by a vote of private landowners in early 1983. It is a distinct possibility that the current 9,900-acre KRF eligible district will not be listed in its entirety. It would, of course, be a perversion of Congressional intent and the interests of private landowners to suppose that having given the landowner such substantial rights with respect to "listing" in the Register, and the consequences that follow, the BLM could by-pass the entire procedure by applying its Multiple Land Use coal screen to prevent coal leasing without regard to the possibility that an actual listing might never materialize.

Excluding eligible cultural resources from leasing is not authorized by law and may circumvent and limit the landowner and developer's substantive rights. In addition, the cultural resources in question do not belong to the federal government and do not constitute a federal "resource."

Nokota requests that the BLM allow these areas to proceed into the EIS where impacts can be noted. This action would parallel the Department of Interior's EIS for the Dunn-Nokota Methanol Project and would allow additional research time for the area in question.

Sincerely,

THE NOKOTA COMPANY

G. E. Andersen
President
GEA/vg
Enclosure

Enclosures not reproduced.

AMERADA HESS CORPORATION

BOX 1486
WILLISTON, NORTH DAKOTA 58801
701-774-9800

March 19, 1987

Mr. Mark Stiles
Project Manager
Dickinson District Office
Bureau of Land Management
P. D. Box 1229
Dickinson, North Dakota 58602

Dear Mr. Stiles:

SUBJECT: Comments on the Draft North Dakota Resource Management Plan and Environmental Impact Statement (RMP/EIS)

Our main concern with the RMP is the increase in acreage with special oil and gas lease stipulations.

My understanding is that these special stipulations are primarily no surface occupancy and seasonal restrictions for the protection of wildlife. If, in fact, surface occupancy adversely affects the wildlife, will the special lease stipulations on federal land just shift the impact to adjacent state or private land with significant additional cost to the industry?

Sincerely,

J. T. Fell

JTF/jd

cc: G. E. Miller
D. M. Castro
K. A. Wagner
R. T. Thomas
K. A. Rossland
Alice Frell Benitez, RMOGA

RECEIVED

MAR 20 1987
BUREAU OF LAND MANAGEMENT
DICKINSON, NORTH DAKOTA

ANTHROPOLOGY
BOX 8554 UNIVERSITY STATION
GRAND FORKS NORTH DAKOTA 58002
(701) 777-3008

March 18, 1987

Mr. Mark Stiles, RMP Project Manager
Bureau of Land Management
Dickinson District Office
P.O. Box 1229
Dickinson, North Dakota 58602

re: Comments on "Draft Resource Management Plan/Environmental Impact Statement" for the Dickinson District.

Mr. Stiles:

I am writing in response to the invitation for public comment on the above-referenced document (hereafter RMP/EIS). My comments specifically address those portions of the RMP/EIS that pertain to cultural resources. I write from the perspective of my 11 years experience in Plains archeology. Since 1987, as a member of the research faculty in the Department of Anthropology, University of North Dakota, I have directed or participated in seven cultural resource studies in southwestern North Dakota.

The RMP/EIS is, in general, a fine document. With only a few exceptions, those sections that deal with cultural resources are clearly presented and well-informed.

The treatment of cultural resources under "Management Guidance..." (Chapter 1, pp. 12-13) and under "Affected Environment" (Chapter 3, pp. 48-50) is up-to-date and well-rounded. The section under "Management Guidance" demonstrates a clear understanding of the BLM's responsibilities under the Section 106 process. The section under "Affected Environment," in particular, shows that the writer(s) have made an effort to familiarize themselves with important background studies. Such familiarity with background material is something all-too-often lacking in federal agency documents of this sort.

I strongly support the BLM's decision to exclude the Knife River Flint Quarry National Register District from consideration in coal leasing. The RMP quarries are without a doubt the most significant prehistoric cultural resource considered in the RMP/EIS. The BLM's actions under either of the four alternatives would be an important step toward ensuring the preservation of this nonrenewable heritage resource.

As the BLM is aware, the District, although declared eligible for the National Register by the Keeper of the Register, has not actually been listed on the National Register. It therefore does not qualify for exclusion under the BLM's Unavailability Criterion 7, as interpreted in 1983, and as established by the courts in 1985. However, the ELM concludes that the District can be excluded as a multiple-use tradeoff under 43 CFR 3420.1-4(e). This is a highly commendable decision. The District has not to date been listed on the

National Register, but as the District may be aware, the reasons for this have little or nothing to do with its importance as a heritage resource. The Knife River Flint quarries deserve consideration as a multiple-use tradeoff, since they are undoubtedly a unique, important, and irreplaceable cultural resource. In addition, as UND has pointed out in previous comments to other agencies, those wishing to develop the coal resources that underlie the District have yet to demonstrate that adequate supplies of coal suitable to the developers' needs cannot be obtained in areas lying outside the District. There appears to this writer to be no compelling reason for leasing coal within the District. **My comments, therefore, support and commend the BLM for excluding the District from leasing as a multiple-use tradeoff.**

While my overall reaction to the RMP/EIS is positive, I feel several areas need clarification. Perhaps if I had time for a more careful reading of the document, I would find that you have indeed addressed some or all of these concerns elsewhere in the document.

1. Does or does not Alternative A (No Action) exclude the KRP Quarry National Register District and the Towner Homestead as multiple-use trade-offs? These resources are mentioned as multiple use trade-offs in the discussions of Alternative A on p. 15 and p. 61. However, there is no column for cultural resources on Table D-2 (p. 113), implying that the acres covered by the two historic properties are not included in the total acreage in this table. The acreage of cultural resources are included on tables for other Alternatives (p. 114-116). Why not for Alternative A?

Also, the text on page 15 implies that the district and the homestead site are definitely to be excluded under Alternative A, but page 61 states only that "It is assumed that the 3,951 acres would remain excluded." What exactly does "assumed" mean in this context? In Alternatives B, C, and D, the District (along with other listed/eligible resources) is unconditionally excluded as a multiple-use tradeoff. Why is the exclusion made conditional for Alternative A? What specifically are the conditions that would negate the "assumed" exclusion of 3951 acres?

In briefly discussing the above concerns with others, I've learned that part of the uncertainty involving Alternative A has to do with a court decision, which was still pending at the time the RMP/EIS went to press. This decision, if understood correctly, involved whether cultural resources on private surface, as well as public lands, qualified for criterion 7. I assume that this decision (and its ramifications for Alternative A) will be discussed in the final RMP/EIS.

2. "Generic" scenarios for dealing with impacts to cultural resources are given in Appendix H and I (p. 132, 135). One good thing about the scenarios is that they acknowledge that coal development will lead to indirect impacts to cultural resources. Unfortunately, no steps are mentioned for dealing with such impacts. I disagree with the statement that such impacts are "uncontrollable but predictable." Surely if an adverse impact can be predicted, steps can be taken to control it: e.g., by limiting off-road vehicle use, by fencing particularly important sites and site areas, etc.

My major concern is that neither scenario explicitly states what steps

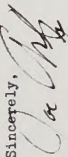
the BLM will take in planning for the demands that energy development can be expected to place on cultural resources. The scenarios state only that "stipulations" will be developed "in the event of a lease and mine proposal" (p. 132) and "in the event of a facility site selection" (p. 135). I believe that there is also a need for advance planning (contingency planning) prior to the occurrence of such "events." I raise three specific concerns:

- (a) For clarification, the BLM should state more explicitly what form the "stipulations" concerning cultural resources would take. Would they be offered in an EIS; a cultural resource management plan; an MOA between BLM and the ND SHPO; or all of the above? What exactly is meant by a "stipulation."
- (b) The BLM has conducted a cultural resources overview of the Dickinson District, and is presently conducting a Class II inventory. Does the BLM intend to use these studies in advance planning for energy development? If so, how?
- (c) The statement on page 135 (quoted above) implies that cultural resource "stipulations" would not be made until the site of an end-use facility had been selected. Wouldn't cultural resources be considered prior to that: i.e., in the process of deciding among alternative selections?

To summarize, although I would recommend that some very minor clarifications be made, I feel that the RMP/EIS in general gives adequate treatment to cultural resources. The individual(s) responsible for developing and writing the sections on cultural resources deserve praise for giving their subject sensitive and sensible consideration. Again, I strongly support the BLM in its decision to exclude the Knife River Flint Quarry National Register District from consideration for coal leasing.

Thank you for providing the opportunity to comment on this document.

Sincerely,



Joe Artz
Associate Research Archeologist

64

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Mark Stiles
Project Manager
Dickinson District Office
Bureau of Land Management
P.O. Box 1229
Dickinson, ND 58602

January 21, 1987

Dear Mr. Stiles,

I would like to comment on the North Dakota Resource Management Plan and Environmental Impact Statement.

My concerns center around the land disposal method preferred in the plan. The plan inadequately addressed land disposal. The BLM has not fully considered the options for land disposal. Other federal agencies (U.S. Fish and Wildlife Service, National Park Service, National Forest Service, and Corps of Engineers) should be given the first priority in managing tracts that the BLM does not wish to manage. State agencies should be given the second priority in managing lands slated for disposal. Finally, local governments wanting to manage the lands for public use need to be given

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United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202
March 17, 1987



6010.2

MEMORANDUM

TO: Mark Stiles, RMP Project Manager
Dickinson District, North Dakota
Bureau of Land Management

FROM: Allen Klein, Chief
Federal Programs Division
Western Field Operations

SUBJECT: North Dakota Resource Management Plan and
Environmental Impact Statement (RMP/EIS)

We have reviewed the draft RMP/EIS for the State of North Dakota and are submitting several comments and suggestions (attached) for your consideration. We appreciate this opportunity to participate in the review of the document and look forward to seeing the final RMP/EIS when it is published.

If you have any questions concerning these comments or any other matter relating to the EIS, please feel free to contact Floyd McMullen in Denver at (303) 844-2451 or FTS 564-2451.

Attachment

the opportunity to manage remaining tracts. After this process has occurred, the remaining tracts should be considered for disposal or trade.

North Dakota has some of the most amazing and productive ecosystems in the country including the prairie pothole area and the badlands. The BLM has holdings in both of these regions and should look for other agencies to manage these lands, if it chooses not to. The Furbush

Gorge is also a very unique area. I feel the U.S. Fish and Wildlife Service would be an excellent agency to

manage many of the BLM's scattered tracts, because it currently manages scattered tracts throughout the state in its Wildlife Production Areas.

I hope the BLM makes changes in its final plan. Please send me a copy

Sincerely,
Kirk Koepsel
Kirk Koepsel
11608 S. Apache Tr.
Centex, CO 80433

OSMRE REVIEW OF THE
NORTH DAKOTA DRAFT RMP/EIS

Comments/suggestions:

66 Page 1, description of the planning area. In the second paragraph the EIS states that "federal minerals are also located under state or privately owned surface." Then it states that "This RMP proposes management strategies for federal minerals located under *** private lands". Please explain why no mention is made of management strategies for the federal minerals located under State-owned lands.

67 Page 32, total suspended particulates. Please provide the reference for the air quality study of the Bear's Den and Croff fields mentioned in the last paragraph of this section.

32 Page 59, coal study areas. Please reexamine the acreages being declared unsuitable under criterion 11, 14, and 15 for cases where exceptions (i.e., those allowed under 43 CFR 3460) could potentially apply. Also, we suggest that the reader be informed that an unsuitability designation does not always mean that a designated area will not be mined. Our experience with surface coal mining has shown numerous cases where unsuitable designations were changed to allow additional coal recovery after site-specific exceptions were applied. (See also coal study areas discussions on pages 68, 77, and 87.)

1366H



United States
Department of
Agriculture

Soil
Conservation
Service

P.O. Box 1458
Bismarck, ND
58502-1458

March 12, 1987

Mark Stiles
Bureau of Reclamation
P.O. Box 1229
Dickinson, ND 58602

Dear Mr. Stiles:

The Soil Conservation Service has reviewed the draft Resource Management Plan/Environmental Impact Statement (RMP/EIS) for the Dickinson District, North Dakota. We have the following comments:

- 68 1) We are unable to locate any discussion concerning potential impacts to prime farmlands within the draft plan/EIS.
- 69 2) On page 35, Table 3-6 may be somewhat misleading in that there are no mapping units recognized as Land Capability Class I (LCC) in North Dakota. We suggest changing the LCC's associated with the high success grouping to II, III & IV and those associated with the moderate success grouping to III, IV & VI.

We appreciate the opportunity to comment.

Sincerely,

August J. Dornbusch, Jr.

AUGUST J. DORNEUSCH, JR.
State Conservationist

ACTING

The Soil Conservation Service
is an agency of the
Department of Agriculture





United States Department of the Interior
BUREAU OF RECLAMATION
Missouri Basin Region
P.O. Box 35900
Billings, Montana 59107-6900

IN REPLY
REFER TO: MB-154

Mr. Mark Stiles
Project Manager
Dickinson District Office
Bureau of Land Management
P.O. Box 1229
Dickinson, ND 58602

MAR 11 1987

Reference: Review of BLM's North Dakota Resource Management Plan and Environmental Statement

Dear Mr. Stiles:

We have reviewed the subject document and have no comments to offer on the document itself. However, we do wish to provide you with information on Bureau of Reclamation activities in North Dakota so as to avoid any possible conflicts between your activities and ours.

As part of our activities under the Garrison Diversion Unit Reformulation Act of 1986, we are beginning preliminary investigations for providing municipal, rural, and industrial water to the Fort Berthold, Standing Rock, and Fort Totten Indian Reservations. As also authorized under this Act, we are initiating studies for developing irrigation on 15,200 acres on the Fort Berthold Reservation and 2,380 acres on the Standing Rock Reservation.

We are, under the same Act, presently involved in completing an environmental assessment/FONSI for the Southwest Pipeline Project. Minor portions of this project have already been constructed by the State of North Dakota, but much remains to be done. We sent a copy of the draft NEPA package for this project to your office in December 1986; the final document and FONSI will also be sent to you in 2 or 3 weeks.

Lastly, we are enclosing the "Draft Supplement to the Draft Supplemental EIS - Reformulation Plan - Garrison Diversion Unit, North Dakota" for informational purposes. A final supplemental statement on the reformulated Garrison Diversion Unit will also be sent to you when it is completed to update you on our planning activities for this project.

Thank you for the opportunity to comment on your document.

Sincerely yours,

B. E. Martin
B. E. Martin
Regional Director

Enclosure



State Historical Society
of North Dakota (State Historical Board)
North Dakota Heritage Center, Bismarck, N.D. 58505
Telephone 701/224-2666

IN RESPONSE PLEASE REFERENCE: 85-150

January 23, 1987

Mark Stiles
Project Manager
Bureau of Land Management
P.O. Box 1229
Dickinson, ND 58602

RE: Draft Resource Management Plan/Environmental Impact Statement (RMP/EIS).

Dear Mr. Stiles:

We have reviewed the above referenced document and find it basically complete and acceptable. We strongly support the decision to find the Knife River Flint Quarries District in Dunn County to be of such value in the consideration of multiple use tradeoffs that the area will not be considered for coal leasing. The following comments are offered to aid the Bureau in producing the best quality Final RMP/EIS possible:

Page Comment

12-13:

The Section 106 process is over simplified here, but the description presented is basically acceptable. You should include a category of "No Historic Properties" [36 CFR 800.4(d)] to cover those potential undertakings which will not have any historic properties (significant cultural resources) in their areas.

Data recovery is often employed to reach a finding of "No Adverse Effect" [36 CFR 800.9(c)(1)] on archeological resources, as well as a mechanism to address "Adverse Effects" per se.

Interested persons [36 CFR 800.1(c)] must be notified in determinations of "No Effect" [36 CFR 800.5(b)] and "Adverse Effect" [36 CFR 800.5(e)(1)]. The public must be informed and provided an opportunity to comment in cases of "Adverse Effects" [36 CFR 800.5(e)(3)].

13: If historic properties are discovered during implementation, it says here that "the contractor" must notify the BLM. This is not clear - what contractor?

15, and elsewhere, including Appendix O:

We concur that the Knife River Flint Quarries District and the Writing Rock State Historic Site are of such great importance and value that they

Mr. Stiles
Page 2
January 23, 1987

should be excluded from leasing. Our records indicate that the A. C. Townley Homestead site has not been formally recorded or evaluated at this writing. If the site has integrity and can be associated with Townley's efforts to establish the Nonpartisan League, then it is most certainly eligible for inclusion on the National Register of Historic Places. Since this site has not been recorded or evaluated yet, we recommend that it not be included in the multiple-use tradeoff process at this time, and that if found significant that all alternative treatments be considered.

61-62:

We concur that these decisions may significantly effect historic properties not considered here in detail. The Bureau should take affirmative action to comply with Section 106 of the National Historic Preservation Act of 1966, as amended, and related regulations to be found at 36 CFR Part 800, on each of these undertakings as they are run through the Bureau's system.

62, and others:

While standard data recovery methods would, in most cases, provide adequate treatment for historic properties, there are likely to be some instances where preservation in place or other extraordinary treatments will be warranted. The Knife River Flint Quarry District, quarry sites outside of that District's boundaries, and burial mound sites known in the coal fields are examples of where extraordinary measures should be considered. We concur that Knife River Flint quarry sites outside the eligible District will be complex to deal with, and that data recovery may well contribute to our understanding and somewhat offset the loss of those properties outside the District.

105, Appendix A:

Activity Planning: you should include reference to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and related regulations to be found at 36 CFR Part 800, as this appears to have been deferred at the Land Use Planning Stage (this RMP/EIS) because surveys are not yet completed.

132, Appendix H:

The generic mine description for cultural resources should include reference to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and related regulations to be found at 36 CFR Part 800, since this has been deferred to Mine Plan Stage.

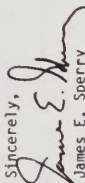
135, Appendix I:

The generic end-use facility description for cultural resources should include reference to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and related regulations to be found at 36 CFR Part 800, since it has been deferred to this stage.

Mr. Stiles
Page 3
January 23, 1987

Thank you for providing us the opportunity to comment on this document. We hope these comments will be of value to the Bureau. If you have any questions regarding these comments, please feel free to contact Mr. C. L. Oll of our staff at (701)224-2672, or in writing.

Sincerely,



James E. Sperry
State Historic Preservation Officer
(North Dakota)

CLO/je

cc: ACHP, Golden

10/11

ROBERT O. BYRON
ADM. ASST.
TO H.A. TRUE, JR.

DRAWER 2360
CASPER, WYOMING
82602

March 3, 1987

Mr. Mark Stiles
Project Manager
North Dakota RMP
Bureau of Land Management
202 East Villard
P. O. Box 1229
Dickinson, North Dakota 58602

Dear Mr. Stiles:

Following are our comments on the North Dakota
Draft Environmental Impact Statement and Proposed
Resource Management Plan on which comments are due
March 25, 1987.

Please advise me where the Montana BLM office
obtains the power to establish special stipulations
on split estate lease lands. I do not believe you
have the authority to apply stipulations to
privately owned surface. The BLM in other western
states has recognized the problems and the potential
for lawsuits in attempting to apply stipulations to
private surface land and has avoided these types of
situations.

You state North Dakota is not subject to
Section 204 of the Federal Land Policy and
Management Act on page 141. This is very strange
since Section 204 of FLPMA concerns withdrawal
procedures when dealing with any public lands. In
Alternative D, you propose withholding roughly
100,000 acres from leasing and although this is not

Mr. Mark Stiles
Page 2
March 3, 1987

Your preferred alternative, it certainly falls under
Section 204 of FLPMA because you are proposing
withdrawing more than 5,000 acres and any withdrawal
of over 5,000 acres must be reported to Congress.

Sincerely,

Robert O. Byron
Robert O. Byron

ROB:cjw



United States Department of the Interior

FISH AND WILDLIFE SERVICE
1500 CAPITOL AVENUE
BISMARCK, NORTH DAKOTA 58501



PER 18 1067

1824 5th Avenue North
Grand Forks, ND 58201

10 March 1987

Mark Stiles, Project Manager
Dickinson District Office
Bureau of Land Management
P.O. Box 1224
Dickinson, ND 58602

Re: Draft RMP/EIS for the Dickinson District

Dear Mr. Stiles:

I am writing to applaud the Bureau's decision to drop the 3761 acres of Federal coal within the KRF Quarry National Register District from further consideration for coal leasing. Certainly this core area of prehistoric surface mines contains irreplaceable information regarding flint quarrying and the stone technologies of ancient North Dakotans. Moreover, the rich archeological deposits of the KRF District hold an inestimable wealth of recoverable knowledge concerning many aspects of the histories and lifeways of Northern Plains peoples over the past 11,000 years.

Beyond the KRF District, the Bureau's overall concern for the proper identification and treatment of other cultural resources is quite clear.

Sincerely,

Michael L. Gregg

Michael L. Gregg

MEMORANDUM

To: District Manager, Bureau of Land Management
Dickinson, North Dakota (Attn: M. Stiles)

From: Field Supervisor, Fish and Wildlife Enhancement
Bismarck, North Dakota

Subject: Draft North Dakota Resource Management Plan and Environmental Impact Statement

We have reviewed the subject draft plan/environmental statement and offer the following comments for your consideration. These comments reflect coordination with our Endangered Species Office in Grand Island, Nebraska.

General Comments

The Resource Management Plan (RMP) and draft environmental impact statement (EIS) provide a comprehensive land-use plan that replaces all prior management direction established in the Management Framework Plans (MFPs), the North Dakota Grazing EIS and the Dickinson District DII and Gas Environmental Assessment. Our review of the RMP was primarily directed to coal, oil and gas, and land pattern adjustment issues that have not been finalized in previous Bureau of Land Management (BLM) planning documents. We have not commented on range and vegetation management because those issues were thoroughly addressed in our comments dated April 12, 1984, on the Draft North Dakota Grazing EIS.

In general, we would like to complement the BLM on the development of this comprehensive RMP. We believe that BLM has done a very good job developing rational multiple-use management alternatives to address the major issues of coal leasing, oil and gas leasing, land pattern adjustment, and off-road-vehicle use on BLM administered lands in North Dakota. Although the respective alternatives superficially appear to allocate similar acreages for coal and oil and gas leasing, significant differences exist in the magnitude of protection afforded to wildlife and associated habitats via the wildlife unsuitability criteria, multiple-use screens, and leasing stipulations. We support BLM's selection of Alternative C (balanced multiple-use) as the preferred alternative.

The preferred BLM management direction presented in this document is very gratifying to the Fish and Wildlife Service (FWS). It represents significant contributions during the past 6 years by FWS, BLM and North Dakota Game and Fish Department (NDGFD) biologists. Joint agency recommendations considered but never implemented in prior BLM MFPs for the Golden Valley, West-Central, Southwest and McKenzie-Williams planning units have now been incorporated into the preferred management alternative for the BMP.

In the assessment of the coal study areas (approximately 1 million acres) and preferred Alternative C, 148,045 acres of wildlife habitat are considered unsuitable for further consideration for coal leasing as a result of wildlife unsuitability Criteria 11 (golden eagle nest sites), 13 (falcon nest sites), 14 (migratory birds of high federal interest) and 15 (resident species of high state interest). In addition, 90,224 acres were identified under the multiple-use screen as having high value to wildlife, but did not qualify for the wildlife unsuitability criteria. However, approximately 41 percent (37,194 acres) was excluded from further consideration for coal leasing due to overlap with other environmental screens. Of the remaining 53,050 acres acceptable, only 27,745 acres could be leased because of a wildlife habitat threshold concept. Cumulatively, a minimum of 223,353 acres of significant wildlife habitats will not be available for leasing. Special reclamation stipulations relative to isolated wetlands and small parcels of native prairie or wooded draws will apply on an additional 206,117 acres. The FWS was a party to the environmental screening process on federal coal acreage and fully supports BLM's coal leasing direction within the preferred alternative.

Alternative C also provides significant protection to fish and wildlife resources through the addition of special oil and gas lease stipulations to new or renewal leases in areas of special resource concern. In particular, raptors (golden eagle, prairie falcon and ferruginous hawk), elk calving areas, sage grouse, wetlands, riparian habitat, bighorn sheep winter range and lambing areas, and prairie dog towns will all receive greater protection at the leasing stage. Similar restrictions can also be applied at the time of Application for Permit to Drill (APD).

The land pattern adjustments strategy for the preferred alternative appears to be responsive to the need to retain important wildlife habitats in federal/state ownership. We support BLM's efforts to exchange some of these scattered tracts to other resource oriented agencies (e.g., FWS or NDGFD) for more efficient management. Otherwise, these tracts, as well as the Big Gumbo and Lost Bridge Management Areas, should be retained by BLM.

Specific Comments

1. Page 8, Air Quality - We are pleased that additional oil and gas stipulations relative to hydrogen sulfide (H_2S) will be required as conditions of approval for all APDs, regardless of the alternative selected. This action should not only improve air quality but reduce the chronic losses of wildlife (primarily raptors and passerine birds) to H_2S poisoning.

2. Page 43, Threatened and Endangered Plant Species - The discussion on Category 2 species should be expanded to include Visser's buckwheat (*Eriogonum visneri*) which is also on the Category 2 plant list for North Dakota. This plant is found in the central part of the state.

3. Page 44, Interior Least Tern - During 1986 surveys, the FWS documented breeding colonies of both the least tern and piping plover on sandbars on the Yellowstone River near the Montana-North Dakota border. The distribution for the least tern should be expanded accordingly.

4. Page 44, Piping Plover - The Draft Recovery Plan for the Great Lakes/Northern Great Plains Populations of Piping Plover reports that piping plovers breed in 22 counties in North Dakota. Primary counties are as follows: McLean, Burleigh, Oliver, Morton, Mercer, Kidder, McLean, Sheridan, Ward, Mountrail, McHenry and Pierce. As referenced above, plovers have now been documented on sandbars on the Yellowstone River in McKenzie County. The distribution for the piping plover should be revised to reflect this new information.

5. Page 59, Coal Study Areas - Although no piping plovers are known to breed in the coal study areas, BLM should be cognizant that potentially suitable habitat exists in the CSAs and that expansion of breeding distribution should be monitored.

6. Pages 145-146, Appendix K, Oil and Gas Lease Stipulations and Leasing Restrictions - The stipulations, as proposed, are excellent. Over the past 5 years the FWS has developed a set of standardized raptor/oil and gas stipulations based on biological data, field experience and the literature. We have received wide acceptance of these stipulations by other resource agencies in western North Dakota. To maintain consistency on recommendations by affected agencies (i.e., FWS, BLM, National Park Service, U.S. Forest Service, Fort Berthold Indian Reservation), we recommend that BLM change the dates on activity near ferruginous hawk nests from "April 1 and July 15" to "March 15 and July 15".

Apparently, lease stipulations for the Golden Eagle Special Review Area (Alternative A) have been inadvertently omitted from Appendix K and should be added.

It is not apparent from the discussion in this appendix whether the Montana BLM standard lease stipulation has been revised to include a notice to the lessee regarding potential raptor breeding habitat (not only golden eagle but also prairie falcon and ferruginous hawk) and additional stipulations at the APD. We suggest that this issue be clarified in the final environmental statement.

Summary

In summary, we believe that the Draft RMP and EIS adequately addresses fish and wildlife resources, impacts from the proposed management alternatives and appropriate mitigation measures. We also believe that the preferred alternative (Alternative C) represents a balanced multiple-use approach to lands and mineral resources under BLM's administration in North Dakota. This alternative will allow for the orderly and sensible development of federal mineral resources while protecting valuable wildlife resources. We commend BLM on their management direction and support Alternative C as a reasonable and prudent alternative.

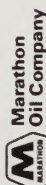
If you have any questions regarding our comments, please contact Roger Collins (FIS: 783-4492).

cc: ARD-FWE, Denver (60120)
(Attn: D. Hoffman & J. Ellis)
FWE, Grand Island (64320)
(Attn: W. Jobman)
EC, Washington

M. S. Zerkow

Southern Rocky Mountain District
Exploration United States

P.O. Box 120
Casper, Wyoming 82602
Telephone 307/235-2511



Mr. Mark Stiles
Project Manager
Dickinson District Office
Bureau of Land Management
P. O. Box 1229
Dickinson, North Dakota 58607

Re: Comments on North Dakota
Resource Management Plan
and EIS.

Dear Mr. Stiles:

The issues and objectives of the plan are to provide for "the least restrictive leasing stipulations necessary" while "ensuring that multiple use objectives are met."

The proposal outline in Alternative D violates these criteria by suggesting no leasing of 99,497 acres. The look at less restrictive stipulations was not taken. Additionally, there is no indication as to what method of withdrawal will be followed. Will the Federal Land Policy Management Act Sec. 204 procedures be used? Although the plan states that North Dakota is not subject to FLPMA, this plan is prepared in accordance with the ACT. Stipulations are appropriate measures to protect surface resources, but should be used according to the issues statement; the least restrictive.

There is no indication of the standard stipulations issued by the Montana State Office. The question of the BLM's role in even attaching lease stipulations to non-Federal surface tracts should be re-examined. Although the statement is made in Appendix K that "these stipulations do not dictate surface management on private lands...", the intent and reality of these stipulations can affect lessees significantly. Lease stipulations for surface resources should not be utilized and, therefore, should not be attached to leases with private surface. Resource protection still applies in areas such as

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Mr. Mark Stiles
February 10, 1987
Page 2

archaeological and threatened and endangered species without the stipulations. Additionally, Section 6 of the lease form provides for additional protection of the environment.

Although the BLM and the oil and gas industry know the phases of leasing, exploration, drilling, development, production, and reclamation, it might be helpful to identify the different phases and to separate them into identifiable units. The data are available in the text to show that all leases are not drilled and that all wells drilled are not producers.

The stipulations represented on Map K-1 are rather vague and it is assumed that the shading of a township represents a stipulation in a portion of the area and not necessarily the entire township. This map presentation is vague because of the redundancy of areas with special stipulations overlapping the other areas, making the presentation additive instead of alternative specific. It would help if the special stipulations were explained, such as sage grouse strutting ground, raptor nesting, or wetlands, to delineate the specific problem in the areas involved. It would also help to identify which areas are Federal minerals and the total Federal lands.

Thank you for the opportunity to comment on this plan.

Sincerely,

Bradley G. Penn

Bradley G. Penn
Land/Environmental Coordinator

BCP:mg

cc: R. K. Bitter
K. V. Bonati
L. M. Bullock
E. M. Grant
J. D. Polisini
R. H. Sims, Jr.
M. M. Wade

(87-M-81)



DACOTAH CHAPTER SIERRA CLUB

1112 Cottonwood Grand Forks, ND 58201

Mark Stiles
Project Manager
Dickinson District Office
Bureau of Land Management
P.O. Box 1229
Dickinson, ND 58602

January 10, 1987

Dear Mr. Stiles,

The following are comments on the Draft North Dakota Resource Management Plan/Environmental Impact Statement dated December of 1986.

Land Disposal

The Sierra Club is very concerned with the BLM's proposed disposal of public land. North Dakota is one of the states with the least amount of public land in the nation. Many of the tracts of land slated for disposal are used or have the potential of being used by recreationalists. We maintain that the proposed plan inadequately addresses the effects of land disposal and does not fully explore alternatives to disposal.

The BLM should give other public agencies the opportunity to acquire and manage public lands before selling these tracts to private concerns. We recommend that tracts of public land in Billings and Golden Valley Counties be transferred to the Forest Service for management in the Little Missouri National Grasslands.

Public Lands in the Prairie Pothole Region of the state should be transferred to the U.S. Fish and Wildlife for waterfowl Production Areas or to the North Dakota Game and Fish Department as Game Management Areas. The Prairie Pothole Region is one of the most outstanding waterfowl production areas in North America. The region has also been severely affected by wetland drainage. The public lands remaining in this region should be retained in public ownership. Both the U.S. Fish and Wildlife Service and the North Dakota Game and Fish Department own scattered tracts of land in this region and would provide adequate management of these lands. Both agencies would also keep these lands open to public access.

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JAN 12 1987

BUR. OF LAND MGMT.
DICKINSON DISTRICT OFFICE
DICKINSON, NORTH DAKOTA

Public Lands within Cavalier County's Pembina Gorge should be transferred to the North Dakota Parks and Recreation Department or to the Nature Conservancy. The Pembina Gorge is one of the most outstanding natural areas in the state, and these lands need to be managed so that the public can enjoy the recreational and natural values these lands possess.

Grant County's Public Lands should be transferred to the Forest Service for management within Cedar River National Grasslands.

The BLM should also consider the possibility of trading public lands outside of the Big Gumbo and Lost Bridge retention areas for additional tracts within these areas.

We feel a good example of how the BLM has dealt with disposal of scattered tracts of public lands in a region where few public lands exist, is the Northeast Resource Management Plan in Colorado. Many of the tracts of public lands, which the BLM did not want to manage in that plan, other government agencies wanted to own and maintain. Since North Dakota has so little public land for recreation and other uses, we feel the BLM needs to do a more thorough and complete job of finding other agencies that want to manage these lands.

Coal Management

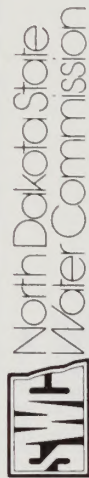
The draft plan failed to consider all the information now required in the Secretarial Issue Document (page DS-3). The Final plan needs to include an analysis on the effects of coal development in relation to wetlands, riparian habitat, aquifers, reclamation, air quality, tribal sacred sites, single grave sites, paleontological sites, and oil and gas wells. Although the BLM examined wildlife thresholds, the plan did not examine other thresholds such as socioeconomic thresholds, clean air thresholds, etc.

Oil and Gas Development

The Draft RMP inadequately addressed the impacts of oil and gas development. We maintain that the Connors v Burford decision relates to all public lands, and that the BLM is required to conduct an environmental analysis on the effects of oil and gas development before leasing occurs. This plan should include that analysis.

We appreciate the opportunity to comment on the draft RMP and are looking forward to seeing the improved final version.

Sincerely yours,
Dexter Perkins
Dexter Perkins
President



GOVERNOR GEORGE A. SINNER
CHAIRMAN
VERNON FAHY
SECRETARY & STATE ENGINEER

HYDROLOGY DIVISION
224-2754

February 10, 1987

Mark Stiles, Project Manager
Dickinson District Office, BLM
P. O. Box 1229
Dickinson, North Dakota 58602

RE: SWC Project #1400

Subject: Review of Draft North Dakota Resource Management Plan and Environmental Impact Statement

The cover letter in the draft solicited comments, particularly with regard to errors in analysis, new information or alternatives, and needs for clarification. This letter is a response to the solicitation.

The draft listed four alternatives for BLM resource management. Alternative A is the current management plan. Alternative C is the preferred alternative, Alternatives B and D are 'development' and 'conservation' variations from Alternative C. A direct comparison of the current plan (Alternative A) and the suggested Alternative C to highlight the direction in which BLM is proposing to move resource management of lands under their control would be informative. A comparison of plans "A" and "C" indicates BLM plans:

- 1) a 46% increase in lands available for coal lease, most of the added lands having special stipulations,
- 2) more than doubling the amount of land available for disposal or exchange plus adding for exchange only slightly more land than currently available for disposal or exchange,
- 3) managed land under oil and gas lease will go from 6% to 45% carrying "special stipulations" (related to wildlife habitat) in addition to the "Montana BLM stipulations", and
- 4) off-road vehicle travel is to be restricted during spring snowmelt (March through May) in some parts of the Pierre Shale outcrop area along the Cedar Creek anticline (Big Gumbo Management Area).

Upon reading the draft I found a few instances, generally related to hydrogeology, where changes are suggested:

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1) page 39, column 1, paragraph 5 - "[Fox Hills-Hell Creek] total dissolved solid concentrations are usually 1000-3000 mg/l and locally can be as high as 10,000 mg/l." In areas where the Fox Hills-Hell Creek aquifer is used as a water source the preponderance of water quality analyses indicate a total dissolved solids (TDS) concentration in the 1000-1500 mg/l range. Parts of Divide and Williams Counties, where the aquifer is virtually unused, have TDS concentrations in the 1500-3500 mg/l range. The 10,000 mg/l concentration may be a result of a mixing of waters or a misidentifying of aquifer zones (I am interested in where the reported 10,000 mg/l Fox Hills-Hell Creek water is from). The sentence presents a misleading representation of the general range of water quality where the aquifer is used as a water source.

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2) page 39, column 2, paragraph 3 - the paragraph discusses glacial and alluvial aquifers. Not specifically mentioned are glacial outwash deposits which are often surficial, have TDS concentrations in the 300-1000 mg/l range, commonly have possible pumping rates in the 500-1500 gallon per minute range, and are often used as irrigation water sources. The buried-valley yield range used in the paragraph, 100-500 gpm, is low on the upper end. Buried valley aquifers will often yield up to 1000 gpm and occasionally 2000 gpm.

83

3) page 41, figure 3-5 - the map actually shows glacial drift aquifers in the state, not just buried-valley aquifers. The original source of the map is a North Dakota State Water Commission compilation of the aquifer maps as identified in county studies.

84

4) page 42, column 1, paragraph 1 - "Ground water in this [Lost Bridge] part of North Dakota is closely related to the geology." The statement does not really say much. Ground water is always related to geology, as well as climate and topography when near land surface. Ground-water in the Lost Bridge area is not significantly more closely related to geology than in surrounding areas, or in western North Dakota generally.

85

5) page 76, column 1, last paragraph - "Federal coal acres overlying buried-valley aquifers found acceptable for coal leasing..." Presumably what is being referred to here is buried-valley aquifer land adjacent to potential coal mine areas. The sediment fill and ground water in buried valleys would seem to preclude coal mining in the foreseeable future while more readily attainable coal resources are available.

86

6) page 130, column 1, paragraph 7 - "Studies have shown that a 'mine floor aquifer' may be formed due to an increase in hydraulic conductivity, storage capacity, and vertical permeability of the spoil materials (Van Voast 1981, Van Voast et al. 1977)." A mine floor aquifer (or base of spoils aquifer) is formed due to the mining method.

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Overburden removal with a dragline results in clasts rolling to the base of the spoil pile forming a rubble zone containing enough void spaces to act as an aquifer in the post-mining setting. The term "hydraulic conductivity" is a replacement for "permeability". It may be more technically correct to use one or the other rather than mixing both in one sentence.

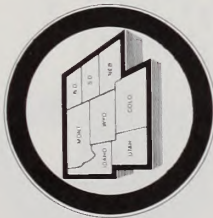
88

7) page 130, column 2, paragraph 3 - "PSC regulations state that all coal processing wastes including ash will be placed in excavated pits approved by the Commission, so that those materials will not adversely affect ground-water quality and flow, create public health hazards, and cause instability in the disposal areas." The State Health Department, Division of Hazardous Waste Management and Special Studies is the lead agency in regulating waste disposal, including that generated by power plants in coal mine areas.

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Alan Wanek
Alan Wanek, Hydrologist

AM:ad



1860 Lincoln Street, Suite 404 • Denver, Colorado 80255
303/860-0099

March 25, 1987

Mr. Mark Stiles
Project Manager
North Dakota RMP
Bureau of Land Management
P. O. Box 1229
Dickinson, ND 58602

RE: North Dakota Draft Resource Management Plan and Environmental Impact Statement

Dear Mr. Stiles:

On behalf of the Rocky Mountain Oil and Gas Association (RMOGA), I am submitting the following comments concerning the Draft Environmental Impact Statement (DEIS) and Draft Resource Management Plan (RMP) for the State of North Dakota. RMOGA has hundreds of members who account for more than 90% of the exploration, development and transportation activities in the Rocky Mountain West. Consequently, we are extremely interested in how the federal government manages lands under its jurisdiction, as well as how energy and mineral resource activities are administered on these lands.

RMOGA strongly supports federal management of public lands which affords maximum opportunities for the exploration and development of energy resources. Therefore, we support the decision contained in Preferred Alternative C to make all federal oil and gas reserves open to oil and gas leasing. However, we are gravely concerned with the BLM Montana State Office policy which allows the application of special stipulations on leases which encompass split-estate lands. While the BLM has the authority granted by nondiscretionary statutes to protect threatened and endangered species and to regulate for conservation of oil and gas, it lacks any power to control privately owned surface uses. The BLM's authority to effect National Environmental Policy Act (NEPA) mitigation extends only so far as it has legal control over the mitigation measures.

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March 25, 1987

Mr. Mark Stiles
Project Manager
North Dakota RMP
Bureau of Land Management

page two

According to *Preservation Coalition v. Pierce*, 667 F.2d, 851 (9th Cir., 1982), and *Friends of Endangered Species v. Jantzen*, 760 F.2d, 976 (9th Cir., 1985), a federal agency may assert control only as far as the law permits. BLM is not able to dictate surface use to private owners nor to impose stipulations to protect privately owned surface. Moreover, it is our belief that this concept represents federal zoning of private lands and should, therefore, be eliminated.

The imposition of mitigation measures upon private land places the BLM in a tenuous position. The only way to gain such authority is to enter into an agreement with the surface owner. As a result of such agreement, the BLM will likely be forced to mediate between lessees and surface owners. It is our understanding that BLM offices in other western states have made a concerted effort to completely avoid such conflict situations. We believe it is evident that these other BLM state offices recognize that the widespread regulation of private surface is beyond the scope of both the authority and duty of the BLM as defined by the Federal Land Policy and Management Act (FLPMA), and is something to be avoided.

Of additional concern is the statement on Page 141 of the planning documents which indicates that North Dakota is not subject to Section 204 of FLPMA. Section 204 dictates those withdrawal procedures the BLM must follow when making, modifying, extending or revoking land withdrawals. We recognize that there is some question as to whether North Dakota is subject to Section 204(L) of FLPMA, which deals specifically with reviewing existing withdrawals. However, North Dakota BLM is clearly subject to the remaining provisions of Section 204, and is probably subject to Section 204(L) as well. Since the Draft EIS and Draft RMP have been prepared in accordance with FLPMA requirements, we do not believe the BLM can pick and choose what parts of statutes it wants to follow. While FLPMA does not specifically apply to any but the eleven contiguous western states, the provisions of FLPMA have been adopted Bureau-wide in the form of regulations. Therefore, North Dakota is subject to all FLPMA requirements despite the fact that it was not specifically included in the statute.

Even though the BLM has not proposed in its Preferred Alternative to designate lands unavailable for leasing, Management Alternative D does propose to withhold approximately 100,000 acres from leasing availability. According to FLPMA, a withdrawal aggregating 5,000 acres or more must be reported to Congress. The BLM has stated that leasing is a discretionary action and it reserves the right to determine which areas should be made available for leasing and which areas should not be made available. Such discretion is indeed within the scope of the BLM's authority; provided the BLM proves that less restrictive measures were found inadequate. In the event that such justification can be

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March 25, 1987

Mr. Mark Stiles
Project Manager
North Dakota RMP
Bureau of Land Management

page three

substantiated, a no lease decision may be warranted. However, according to FLPMA, a no lease decision constitutes a withdrawal which must be reported to Congress. Therefore, we encourage the BLM to include in its discussion of Management Alternative D a statement which indicates that the no lease decision would result in a formal withdrawal request being forwarded to Congress for action.

With regard to the table on Page 19, it would be helpful if the lease categories were further divided. There is a critically important difference between leasing with no surface occupancy stipulations and leasing with other less restrictive stipulations, such as seasonal or timing restrictions. This table should be revised in the final document to reflect separately the acreages associated with NSO and seasonal stipulations. It would also be beneficial if this separation were indicated on the Alternative maps. Industry as well as the public would have a clearer demonstration as to which lands are subject to what types of constraints.

Another item of concern relates to Appendix K, Oil and Gas Lease Stipulations and Leasing Restrictions. On Page 146 the BLM indicates that in accordance with the Preferred Alternative C, "no surface occupancy would be allowed within the visible area within a 3.5 mile radius of the Fort Union Historic Site". We believe this proposed "buffer zone" is unnecessary and will cause undue hardship to lessees in the area. While many people believe that energy companies are capable of using directional drilling techniques in many areas, directional drilling is subject to numerous scientific and technological criteria before it is deemed feasible. For instance, one must consider whether the well is an exploration effort or a confirmation well used to define a known structure. An additional factor involves the depth of the proposed well. In most cases it is only feasible to directionally drill for one-half mile. It would be virtually impossible to directionally drill 3.5 miles.

The ostensible purpose of the proposed buffer zone is to protect scenic values associated with the Fort Union Historic Site which could be impacted by oil and gas activity. There are many methods currently employed which minimize visual impacts without having to resort to prohibiting surface occupancy. We believe the BLM has abdicated its responsibility by creating this NSO buffer zone. In our opinion, this decision indicates that the BLM is unwilling to work with operators to develop a reasonable plan of operation for conducting activities in this area. In addition, designation of such a buffer zone creates a precedent for avoiding reasonable, site-specific management. This decision should be modified to allow oil and gas leasing with special stipulations that permit surface occupancy. Further, drilling proposals should be evaluated on a case-by-case basis to determine how operations may proceed under reasonable

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March 25, 1987

Mr. Mark Stiles
Project Manager
North Dakota RMP
Bureau of Land Management

page four

constraints to protect visual quality. The BLM must keep in mind that oil and gas activities are temporary in nature and that reclamation procedures are utilized which eliminate any long-term visual impacts.

In conclusion, I would like to thank you for the help you have provided RMOGA regarding this planning effort. If you would like to discuss our comments in greater detail, please do not hesitate to contact me.

Sincerely,

Alice Freil Benitez
Alice Freil Benitez
Public Lands Director

AFB:cw



NORTH DAKOTA PARKS AND RECREATION DEPARTMENT

Pinehurst Office Park
1424 West Century Avenue
Suite 202
Bismarck, ND 58501
Phone: (701) 224-4887

March 26, 1987

Mark Stiles, Project Manager
Dickinson District Office
Bureau of Land Management
P.O. Box 1229
Dickinson, ND 58602

Dear Mr. Stiles:

The North Dakota Parks and Recreation Department has reviewed the Draft North Dakota Resource Management Plan and Environmental Impact Statement and have the following comments. Our concerns focus on natural areas protection, rare flora and fauna protection, recreation including ORV area designations and Areas of Critical Environmental Concern.

I. Alternatives

In general, we concur with selection of Alternative C as the preferred alternative, with the following exceptions:

1. Off-road vehicle use designation under Alternative D is preferred for Big Gumbo area. This would be in alignment with our Department's administration of the state nature preserve program and the state all-terrain vehicle (ATV) program. Parts of the Big Gumbo area were identified through the Natural Heritage Inventory as requiring management as a natural area. We are also aware that the Big Gumbo has very fragile soils and vegetation, which could be destroyed by indiscriminate ORV use. At the same time the state ATV program recommends ATV use be set up in designated areas and/or trails. The Big Gumbo might be able to provide such designated areas and trails, but more research is needed. At the very least, BLM should coordinate their activities with our Department before opening the entire Big Gumbo to ORV use certain times of the year. We might be available to recommend areas or trail locations and standards.

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2. Oil and Gas Lease Stipulations

Floodplains (page 146) "No surface occupancy (NSO) would be allowed to protect the floodplain of the Missouri River from possible pollution" should be in the preferred alternatives. There are two main reasons for this. First, the State Outdoor Recreation Interagency Council (SORIC) is presently completing a statewide rivers assessment and through a random public survey, found the free flowing stretch of the Missouri River ranked highest in the state for recreation use, conservation of natural, cultural, and recreational values, and economics. In addition, it was

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ranked by SORIC as a Class I, greater than statewide significance river. Second, the National Park Service listed the Missouri River in their final Nationwide Rivers Inventory.

Natural Areas Federally designated natural areas, state-designated nature preserves and state managed natural areas should be included as a lease stipulations to the effect that NSO would be allowed on the sites. Their township-range information should be added to the map of North Dakota Oil and Gas Lease Stipulations. These stipulations should be placed in the preferred alternative.

FEDERAL: Site	County	Township Range
74 Big Top, Two Top Mesas	Billings	T144N R101W
Fischer Lake	Stutsman	T142N R67W
Rush Lake	Cavalier	T163N R62W
Sibley Lake	Kidder	T14DN R72W
STATE: Cross Ranch	Oliver	T143N R81, 82W
		T142N R81, 82W
Gunlogson Arboretum	Pembina	T161N R55W
Head-of-the-Mountain	Sargent	T129N R54W
Sentinel Butte	Golden Valley	T139N R104W
Pembina Gorge	Cavalier	T163N R58, 57W
		T164N R58W

II. Specific Comments

- A. Areas of Critical Environmental Concern - We are pleased to see you will consider future ACEC proposals, but question your management guidance for ACEC's (page 13) which states that "ACEC designation will be made when critical resource values cannot be made through other management actions." This guidance is in contradiction to the provisions of FLPMA which require the BLM to give priority to the designation and protection of ACEC's in the development and revision of land use plans. Also, FLPMA and the new draft ACEC guidelines (BLM manual section 1617) state that ACEC's are areas where special management action or attention is required to protect and prevent irreparable damage to important historic, cultural, scenic, and natural values or to protect human life and safety from natural hazards. We do not believe that this means that ACEC's should be designated when there are no other alternatives to management. We suggest your guidance follow the intent of the law more closely.

In regards to the three areas that were nominated for ACEC designations, we concur with your recommendations, as long as BLM ensures the critical resource values will be protected and properly managed.

For your information, a portion of the Big Gumbo site may be nominated for designation as an ACEC in the future. This could logically overlap into future resource activity plans you may be initiating for the Big Gumbo area for wildlife (page 10).

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General Recreation Comments - As pertaining to recreation resources, all alternatives provide like consequences. We would encourage some type of recreation management and development plan for trails, camping, access for hunting, fishing, hiking, etc. Recreation areas are needed in western North Dakota to provide regional sites and opportunities not available locally. Recreation desires are quite diversified which require some type of land use planning. The 8LM North Dakota Resource Management Plan does address this issue to an extent, however, further direction should include implementation of 1985 SCORP recommendations.

C. Threatened, Endangered and Rare Species and Non-game Species

We are concerned that throughout the planning process there has been no consideration given to threatened and endangered or rare plant species. We also are disappointed that information in the Natural Heritage Inventory data bank, which is the State's most complete single source of existing data on North Dakota's rare, endangered, or otherwise significant plant and animal species, plant communities and other natural features, was not used in the planning process. There are several steps in the planning process in which the information will be useful to the BLM. These are:

1. Lands Found Unsuitable, Criteria 8 and 10.
2. Populations of many of the non-game species (especially threatened, endangered and rare) listed in Appendix M (See page 45 under Other Non-game Species)
3. Multiple Use Trade-offs (we understand that Game and Fish will be commenting on this and defer to them.)
4. Special oil and gas lease stipulations for our proposed natural area criteria and for threatened and endangered species criteria.
5. Land pattern adjustment criteria (Appendix N), especially for site-specific evaluation criteria: threatened and endangered species and rare species of high interest to the state. Along this line, we recommend you include plant species as well as wildlife species.

Lastly, the Dakota Buckwheat (*Eriogonum visheri*) is also a federal "Category 2" species (page 43).

D. Oil and Gas Lease Stipulations and Leasing Restrictions (Appendix K) and Oil and Gas Processing Procedures (Appendix L).

Besides the addition of nature preserves, state managed natural areas, and federally designated natural areas as an oil and gas lease NSO stipulation (see section on alternatives), we recommend including the areas proposed as ACEC's for NSO restrictions. Also, we question why Knife River Indian Villages National Historic Site is not given NSO protection but Fort Union National Historic Site is.

Lastly, we recommend the BLM apply the same criteria in Appendix K (plus our additions) to the Application for Permit to Drill process to assess impacts and mitigate when possible.

B. Recreation

Off-Road Vehicle Travel Restrictions (page 4). - In areas where ORV use does not cause significant impacts and are designated as open to ORV use, management plans should be implemented to allow trail development by interested agencies, utilizing trail standards established by appropriate agencies.

Off-Road Vehicle Use Designations (page 5) - Determination should be made between different types of ORV use. Four-wheel drives, all-terrain vehicles, snowmobiles, and mountain bikes are examples of specific vehicles with variable use on different terrains.

Recreation Assessment (page 48) - Your recreation assessment should include the most recent 1985 State Comprehensive Outdoor Recreation Plan (SCORP). According to the 1985 SCORP, high priority recreation opportunities which should be incorporated in the discussion of coal study areas and surface lands include:

- Motorized and non-motorized trails
- Access to recreation areas located in remote regions
- Camping
- Access to Missouri and Yellowstone Rivers
- Facilities for primitive and developed recreation areas
- Acquisition of hunting areas.

These items were determined through public workshops located in Williston, Dickinson, Minot, and Bismarck representing western and central North Dakota. As noted, there is a need for developed recreation sites in western North Dakota. If policies of the BLM do not promote development, perhaps consideration should be given to leasing appropriate sites in specific areas recognized as prime recreation regions. Hiking, walking, and nature trails should be considered as potential recreation opportunities in coal study areas. According to the 1985 SCORP, "Trails have been listed as a priority need in every region. Bicycling, jogging, and hiking/walking are mentioned most frequently with ATV, snowmobile, nature/interpretive, and cross-country ski trails closely following."

As stated in the 1985 SCORP, responsibilities of federal agencies include: "Developed trails and related recreation sites on federal lands in conjunction with needs addressed in the SCORP in an effort to maximize the federal estate ..."

"Cooperate with state and local governments in identification and development of water-based recreation sites within federal jurisdictions."

Recreation and Visual Resources Impacts (pages 61,70,80,89) - As demonstrated through oil and coal development in previous years, population immigration will have a definite impact on surrounding regional and community recreation opportunities. Mitigation, as stated in the plan, must address and require additional opportunities. At such time when mitigation is imminent, recommendations for high priority recreation activities as addressed in the 1985 SCORP should be followed.



THREE AFFILIATED TRIBES • FORT BERTHOLD RESERVATION

Mandan, Hidatsa and Arikara Tribes

NATURAL RESOURCES DEPARTMENT

P.O. Box 460 • New Town, North Dakota 58763 • (701) 627-3620

March 24, 1987

Mark Stiles, Project Manager
Dickinson District Office
Bureau of Land Management
P.O. Box 1229
Dickinson, ND 58602

RE: N. D. Resource Management Plan and
Draft Environmental Impact Statement

Dear Mr. Stiles;

These comments are submitted regarding the above referenced documents. They are intended to be as specific as possible. The section of document being commented on will be identified and precede the comments.

Chapter Two - Land Pattern Adjustment

The Tribes support the consolidation of tracts within the Lost Bridge area. This consolidation is discussed in Alternative C - Preferred.

Where land pattern adjustment includes the possible disposal of BLM managed lands the discussion should include the possibility of the transfer of those lands to the Bureau of Indian Affairs to be held in Trust for the Three Affiliated Tribes. This is particularly true for those lands identified in Table N-1 which are adjacent to the Fort Berthold Reservation.

Chapter Three - Air Quality

The Three Affiliated Tribes have had an ambient air monitoring program since 1982. For the first five years the program was funded by the U.S. Environmental Protection Agency utilizing authority contained in Section 103 of the Clean Air Act. These grants allowed the Tribes to construct monitoring facilities near Lost Bridge, Twin Buttes, and the community of Dragsvolf.

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E. ORV Impacts Under Alternative C (page 77)

We are not convinced that ORV restrictions in the Big Gumbo Area, as proposed under Alternative C, would adequately protect vegetation. Hence, we recommend Alternative D be selected for ORV use restrictions (See section under Alternatives).

F. Land Pattern Adjustment

What is the management guidance for R & PP? We did not see it included under the Lands and Realty Section (page 11).

We are particularly interested in the procedure for handling those sites identified for disposal that we have also identified as possessing high public natural resource values. In other words, we call for a planning framework which ensures that high natural resource values are not jeopardized. This pertains to, but is not limited to, the three sites originally nominated as Areas of Critical Environmental Concern and others. North Dakota Game & Fish Department previously provided a current summary of North Dakota Natural Heritage Inventory data appropriate for site-specific evaluations. We reiterate that the absence of site information does not necessarily mean that the site is not significant. The natural resource data files are expanding each year and the North Dakota Natural Heritage Inventory will provide appropriate updated information on BLM scattered tracts through the Natural Areas Coordinating Committee. Additional site information from BLM tracts visited by North Dakota Natural Heritage Inventory staff for the first time in 1986, and a summary of information on Big Gumbo will be sent under separate cover.

Thank you for the opportunity to comment. If you have any questions on these comments, please contact Pamela J. Dryer of my staff.

Sincerely,

Doug Etkin
Doug Etkin
Director

DE/jar

Suspended particulate matter and meteorological parameters are monitored at all sites. In addition, sulfur dioxide is monitored at Lost Bridge as was hydrogen sulfide for three years. The Tribes also prepared an emission inventory and an air pollution climatological study of the reservation utilizing the Section 103 grants.

In fiscal year 1987 the tribal Air Quality Program is being funded by a Section 105 grant. A primary purpose of these grants is to develop programs to prevent and control air pollution. Using the monitoring data, emission inventory, and climatological study the Tribes are considering a wide variety of regulatory approaches. The Tribes have discussed at length the possibility of redesignating the Fort Berthold Reservation to Class I in regard to Prevention of Significant Deterioration. The redesignation of Indian reservations is authorized in Section 164 of the Act.

Although, it is unlikely the Tribal Business Council will elect to redesignate the Fort Berthold Reservation to Class I, it is very likely that the Tribal Air Quality Management Plan will be significantly more stringent than the North Dakota State Implementation Plan in regard to PSD sources. It is therefore very likely that the Tribal Air Quality Management Plan would therefore affect oil and gas development west of the reservation and coal development west, south, and east of the reservation. I think it is imperative that in developing the resource management plan BLM consider what effect redesignation, or any tribal air quality regulations would have on utilization of BLM managed resources.

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This topic should also be addressed in the first paragraph of the section regarding Air Quality contained in Chapter Two. The last sentence should be changed by adding the phrase "or the Three Affiliated Tribes" after (NDSOH).

Chapter Three - Cultural Resource Management

In the Social Well-Being portion of this section the last sentence of the last paragraph implies that the Fort Berthold Reservation has a low proportion of tribal members graduating from high school. This is not the case. According to 1980 U.S. Census data the percentage of the Indian population on the reservation over twenty five years of age that has completed high school is approximately 59%. This figure compares favorably with the statewide figure of 66%.

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Map K-1

This map shows indicates which areas would have special stipulations included in oil and gas leases issued under each alternative. Several townships on Fort Berthold have been shaded. It appears that for convenience the smallest area where special stipulations are applied for each alternative is an entire township. It appears that the only departure from this convention is Township 148 North, Range 95 West. The eastern half of this township is entirely within the reservation boundaries. Even within this portion of the township where there are no federal minerals the shading pattern varies. This departure from the norm needs additional clarification.

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Sincerely,

Rich Schilf

Rich Schilf
Geologist/Environmental Quality Coordinator

cc: Ed Lone Fight, Tribal Chairman
101.2



Diamond Shamrock
Exploration Company

March 23, 1987

Bureau of Land Management
Dickenson District Office
P.O. Box 1229
Dickenson, N.D. 58602-1229
Attn: Mark Stiles

Re: Draft North Dakota Resource
Management Plan EIS

Dear Mark:

Diamond Shamrock Exploration Company offers the following comments
on the subject draft EIS.

The decision contained in your Preferred Alternative C to make all
federal oil and gas reserves open to oil and gas leasing is a noble one;
however, we question why 206,117 acres of federal oil and gas leases would
have Special Lease Stipulations applied to them in addition to Montana
BLM Standard Lease Stipulations. Site Specific Stipulations attached to an
approved Application for Permit to Drill would be more appropriate, as
these Special Lease Stipulations may not be representative of an entire
lease area. As a matter to this Special Lease question, along with Land Pattern
Adjustment and Off-Road Vehicle Use Designations, Diamond Shamrock's
Preferred Alternative is Alternative A - continuation of present management.

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An area of concern to us is the BLM Montana State Office policy, which
allows the application of Special Stipulations on leases which encompass
split-estate lands. The BLM lacks any power to control privately owned
surface uses other than to protect threatened and endangered species,
and to regulate for conservation of oil and gas. Thus, BLM is not able to
dictate surface use to private surface owners, nor to impose stipulations
to protect privately owned surface.

Thank you for this opportunity to comment.

Sincerely,

James M. Pachulski
James M. Pachulski
Sr. Environmental & Regulation Engineer

JMP:kc

Diamond Shamrock Exploration Company A Subsidiary of Diamond Shamrock
P.O. Box 2530, Miles, Wyoming 82644



**MOUNTAIN
STATES
LEGAL
FOUNDATION**

1200 Lincoln Street, Suite 600
Denver, Colorado 80203
303-861-0244

Mark Stiles
Project Manager
Dickinson District Office
Bureau of Land Management
P.O. Box 1229
Dickinson, North Dakota 58602

RE: COMMENTS ON THE DRAFT NORTH DAKOTA RESOURCE
MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

Dear Mr. Stiles:

STATEMENT OF INTEREST

The Mountain States Legal Foundation (Foundation or MSLF),
on behalf of itself and its members, submits the following
comments regarding the Draft North Dakota Resource Management
Plan and Environmental Impact Statement (hereafter Draft Plan).

The Foundation and its members have a substantial interest in
the resource decisions to be made in the North Dakota Plan.

MSLF is a nonprofit, membership, public interest legal
foundation. The purpose of the Foundation is to promote in the
court system the principles of free enterprise, protection of
private property rights and individual freedoms, and limited
government regulation. Since its establishment in 1977, MSLF
has actively litigated cases concerning the management of
federal lands and their resources.

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MSLP members in North Dakota make their living in the oil and gas, mining, energy production, and livestock grazing businesses and depend on access to federal lands and minerals. The Draft Plan's alternatives and underlying decisions directly affect their access and use of these resources.

The Foundation commends the Dickinson District for its efforts to produce a plan with a goal of true multiple use of the public lands. The Draft Plan makes on obvious effort to account for site specific uncertainty. Management decisions based upon a case-by-case analysis of particular proposals, in the light of policy set out in the overall resource management plan, is surely what was intended by the drafters of both the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. § 1701 et seq., and the Bureau of Land Management's (BLM) planning regulations.

But while the Draft Plan makes an excellent start toward achieving the goals of multiple use management, there are several areas that must be reconsidered. Despite the best of intentions, the statutorily mandated multiple use cannot be achieved if, in the course of case-by-case analysis, or even embodied in the Plan itself, there exists a preference or prioritization of one resource use over another. The Foundation's concerns about the Draft Plan are briefly summarized as follows:

- I. 107 Multiple use lands, that is those lands not withdrawn, classified, or otherwise legally dedicated to something less than "multiple use," must be available to the uses identified in FLPMA, 43 U.S.C. § 1702 (1).
- II. 108 The methodology of several aspects of the Draft Plan and EIS is not made clear in violation of 40 C.F.R. § 1502.24.
- III. 34 The Draft Plan imposes surface use stipulations on split estate lands and this action is beyond the authority of the BLM.
- IV. 109 Restrictions on the use of riparian areas should not be applied to grazing uses.
- V. 110 Preparation of the Draft Plan and EIS was not an interdisciplinary effort in violation of 43 C.F.R. § 1610.1 (c) and 40 C.F.R. § 1502.6.
- VI. 111 The wildlife data used in the Draft Plan and EIS is inadequate in violation of 43 C.F.R. § 1610.4-3.
- VII. The negative environmental consequences of commodity production are overstated.

Because of the breadth of these flaws, and especially because of the failure of the Draft Plan and EIS to address the methodology of some of the most critical decisions, the Plan must be submitted for comment in Draft once more after correction of these deficiencies. To do otherwise deprives the public of the opportunity to comment on the underlying basis of the decisions made in the plan, in violation of FLPMA and NEPA. The Foundation's concerns are more particularly set out below.

I. THE DRAFT PLAN AND EIS FAILS TO ABIDE BY THE
MULTIPLE USE MANDATE OF FLPMA AND AGENCY
REGULATIONS

It is clear from several aspects of the Draft Plan that multiple use as defined by FLPMA is not being implemented on the ground. For instance, in the application of the coal screens, the presence of any single conflict between coal and another multiple use "tradeoff" resulted in an area being dropped from further consideration of coal leasing. Draft Plan at 111. This process contradicts multiple use by failing to harmonize and coordinate uses and is illegal. The Surface Mining Control and Reclamation Act, 30 U.S.C. § 1272, and 43 C.F.R. § 3420.1-4 (e)(3) makes it clear that beyond the designation of areas as unsuitable for surface mining (the first coal screen) coal planning is to be done in the context of multiple use planning. FLPMA does not allow the elevation of one multiple use over another in such an arbitrary and summary way. Indeed, Congress rejected recommendations for dominant use management.

The Draft Plan also proposes to manage the federal surface estate as an "extensive recreation management area for dispersed, non-developed activities, e.g. hunting and trail activities." Draft Plan at 12. It is not clear that this is intended to be an exclusive use, but the exclusion of other major multiple uses violates FLPMA. That such a preference is

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in fact being given to non-commodity uses is not farfetched. The specific purpose of Alternative D is the protection of amenity values. To this end, the Draft Plan states explicitly that cultural resources, wildlife habitat, and recreation are favored over conflicting uses such as minerals. Draft Plan at 19. As is clear from an examination of the text and history of FLPMA, such preferential dominant use management is clearly illegal.

The definition of multiple use in FLPMA and its legislative history show that Congress intended that public lands be open to a multiplicity of uses. It is equally clear that Congress opposed the management setting of priorities on public land.

Congress specifically admonished the Secretary of the Interior to use and observe the principles of multiple use and sustained yield in the course of land use planning. 43 U.S.C. § 1712 (c)(1). The Public Land Law Review Commission (PLSRC), after specifically faulting the multiple use concept for causing management difficulties in *One Third of the Nation's Land* pp. 44-45, proposed that public land be managed for the highest and best use of a particular area. *Id.* at 48-52. Primary uses would be dominant over secondary uses, which would be allowed only if compatible with the primary use. Yet Congress rejected the PLSRC's recommendation in favor of a longstanding policy of true multiple use.

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The legislative history shows that Congress considered the PLURC recommendation but chose the status quo. FLPMA's mandate that public land be managed in accordance with the principles of multiple use and sustained yield is derived from the definitions in the Classification and Multiple Use Act (C&MUA) of 1964, 43 U.S.C. §§ 1411-1418 (expired). See, S. Rep. No. 583, 94th Cong., 1st Sess., 1, 38 (September, 1975), reprinted in 1976 U. S. Code Cong. & Admin. News 6175; also reprinted in Legislative History of the Federal Land Policy and Management Act of 1976 (1978) 66, 103, 104 (hereafter Legislative History).

Similarly, Congress endorsed the then existing land use planning process and procedures. Both the Senate and the House agreed that the land use planning section was necessary because BLM's authority expired and that explicit statutory authority to support the BLM's activities was necessary. Legislative History 110, 435. Moreover, the general mandate and criteria for land use planning was substantially the same in both the Senate and House bills.¹

1S. 507, § 103(a) and (b) provided for the authority and criteria for land use plans. Legislative History at 110-111. In H.R. 1377, land use planning appeared in § 202 with an additional (eighth) objective requiring coordination with plans of state and local governments and Indian tribes. Classification review and termination were also added. Legislative History at 435-436.

Congressional intent to retain the principle of multiple use over the PLURC recommendation is clear. The Senate report on S. 507 includes a summary of the Commission's efforts, Legislative History at 34-37. Congress considered most of the PLURC recommendations to be meritorious, specifically noting that more than 100 were incorporated in the initial legislation. Legislative History at 35. Nonetheless, those recommendations for a 'primary use' of the public lands were rejected by Congress. The only inference that can be drawn from these facts is that, after careful study, Congress determined that multiple use was superior.

While it is true that FLPMA provides for multiple use to include the use of land for some or all resources, 43 U.S.C. § 1702(c), it does not follow therefrom that any one resource is to be given priority over another. Indeed, Congress established a concept of "principle or major uses"² which include "domestic livestock grazing, fish and wildlife development and utilization, mineral exploration and production, right-of-way, outdoor recreation, and timber production." 43 U.S.C. § 1702(1). The House report explained:

The term 'principle or major uses' is defined for the purposes of Section 202 of the bill. They represent the uses for

²Termination of a major use is a management decision that must be reported to Congress. 43 U.S.C. § 1712(e).

which Congressional oversight is particularly needed. The definition does not mean to imply that other uses such as 'watershed' are not of great public significance.

Legislative History at 436. In the instances described above, the Draft Plan and EIS pit major uses against each other for "priority." Congress has already rejected any such preference in favor of harmonizing and coordinating multiple uses.

Congressional concern over restraints on multiple use of the public lands is evident from its enactment of Section 202(c) of FLPMA which provides, among other things, that in the development of land use plans the Secretary of the Interior shall use and observe principles of multiple use and sustained yield and use a systematic interdisciplinary approach to consider a variety of physical and social scientific data to arrive at a plan. 43 U.S.C. § 1712(c)(1) and (2). This section also provides for classification termination and Congressional review of the termination of a major use. 43 U.S.C. § 1712(d)(c). Congress' desire to eliminate restraints on multiple use is further reflected in Section 204(1) which mandates the review and termination of withdrawals which close the public lands to specified purposes. 43 U.S.C. § 1714(1). That Congress favored the removal of restrictions on multiple use is reflected in debate on the withdrawal review provisions. Legislative History, 670, 684, 687.

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Congress has spoken clearly to this issue. Prioritization of major areas on public lands is unacceptable. To the extent that the Draft Plan and EIS does so, it violates the text of FLPMA and the policy of multiple use.

Similarly, no Bureau regulations authorize the prioritization of resource values in land use planning. In fact, the regulations are directly contrary to the concept. The principles of resource management planning, as set forth in 43 C.F.R. § 1601.0-8, expressly adopt the principles of multiple use and sustained yield in Section 202 of FLPMA. Furthermore, under 43 C.F.R. § 1610.4-4, inventory data and other information used in resource management planning must be analyzed in a way consistent with multiple use principles.

The Bureau's acceptance of true multiple use policy is explicit in its regulations for implementation of the Classification and Multiple Use Act, 43 U.S.C. §§ 1411-1418 (now expired). These regulations are especially important when it is recalled that Congress derived the multiple use principles of FLPMA from the C&MUA and did not direct radical changes in BLM's land management policies under that Act. Legislative History at 103-104, 110, and 435. 43 C.F.R. § 1725.3-1 (1985) states that no overall priority is assigned by either the C&MUA or the Secretary to a specific use on lands

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retained for multiple use management. Insofar as the Draft Plan and EIS prefers some uses over others, it runs directly counter to this regulation.³

II. THE DRAFT PLAN AND EIS DOES NOT IDENTIFY THE METHODOLOGY UNDERLYING CRUCIAL DECISIONS IN VIOLATION OF REGULATION

The regulations of the Council on Environmental Quality require that an EIS identify the methodologies used and explicitly reference the sources relied on for conclusions. 40 C.F.R. § 1502.24. In five different cases the Draft Plan fails to do so. In each case this failure deprives the public of the opportunity to examine and comment upon the basis, if any, for decisions made.

Management prescriptions, described as a variety of specific management actions addressing individual issues, are not identified, nor is the process for arriving at the prescriptions explained. Draft Plan at 7. If this Draft Plan is at all similar to others already in effect or circulation, it is crucial that these prescriptions and the process for

³This policy is reflected in the agency's planning regulation designations which lie outside the scope of multiple use. These are designation of areas unsuitable for surface mining and the designation of areas of critical environmental concern, both of which are mandated by statute. 43 C.F.R. §§ 1610.7-1 and 1610.7-2.

arriving at them be subject to public comment. Prescriptions and their underlying rationale, if improperly used, have the ability to determine the outcome of the planning process well before even alternatives are developed.

Management prescriptions, goals and specific plans have not been developed for Wildlife Habitat Management. They will be developed as necessary and when an inventory for seasonal use is completed. Draft Plan at 10. The process by which these prescriptions will be developed, and their effect on other land uses, must be set out in detail. Additionally, the Draft Plan should consider what the absence of these prescriptions means to land users now, and what effect their eventual imposition will have on existing uses.

The Draft Plan imposes special stipulations for mitigation of environmental effects of coal mining. But unlike the stipulations for oil and gas leases, they are no where described with particularity. Draft Plan at 16. Again, this defeats the purposes of public notice and comment.

For purposes of excluding areas from coal development as a result of the multiple use tradeoff, one criteria identified areas exceeding established thresholds of regionally important wildlife habitat. Draft Plan at 16 and Appendix D. Yet again, no rationale for the designation of these areas is offered. The basis for determining these areas, indeed the underlying basis for determining the "threshold" itself must be

explained. This is especially important in light of the Draft Plan's admission that no wildlife prescriptions have been developed and that no seasonal use inventory has been completed. Draft Plan at 10.

Finally, no reason is offered for the use of the three criteria, all of which must be met, used to determine coal development potential.⁴ Draft Plan at Appendix B, 107.

Absent an explanation for these decisions and the methodology underlying them, they are arbitrary. The revised Draft Plan and EIS should consider these points in detail.

III. THE BUREAU OF LAND MANAGEMENT HAS NO AUTHORITY TO IMPOSE SURFACE USE STIPULATIONS ON MINERAL LEASES UNDER PRIVATELY OWNED SURFACE ESTATE

In North Dakota the BLM manages 4.8 million acres of federal mineral estate, and only 67,520 acres of surface estate. It appears, however, that in leasing the mineral estate BLM intends to impose surface use stipulations, from the most standard to the most outrageous, upon leases under private surface estate. Draft Plan, Appendix K at 145. This BLM cannot legally do.

4) 1) Maximum 20:1 stripping ratio; 2) Maximum 200 feet of overburden; 3) Coal at least 5 feet thick. These apply to coal with over 5000 Btu/lb.

Oil and gas stipulations include standard and special stipulations. Draft Plan, Appendix K. But off-road vehicle stipulations apply to all oil and gas leases as well. Draft Plan at 19. Additionally, each oil and gas facility is allowed only one main road. Draft Plan at 12. The BLM reserves the right to include stipulations to protect the surface owner, and to include the surface owner in discussions, at lease issuance. Draft Plan at 145.

The special stipulations for coal mining are not set out in detail.⁵ Draft Plan, Appendix F at 125. At least one is the banning of mining on slopes greater than 30% grade. Draft Plan at 16. This stipulation is being applied despite the Draft Plan's admission that slopes greater than 30% have been reclaimed successfully and that the North Dakota Public Services Commission (NDPSC) allows steep slope mining in certain circumstances and requires reclamation. Draft Plan, Appendix D at 111, 66. The Draft Plan further finds that application of the NDPSC reclamation requirements results in no long term impact on the soil. Draft Plan at 75.

⁵The certain application of surface use stipulations on private surface is underscored by the fact that of all the Coal Study Areas in the Draft Plan, only 1318.57 acres are under federal surface estate. Draft Plan at 46.

Appendix I of the Draft Plan even suggests that stipulations would be applied to an end use facility coal power plant. The impact of the facility on wildlife could be mitigated by: 1) siting the plant with regard for wildlife areas; 2) adjusting work shifts to avoid wildlife crossing roads; 3) provide mass transportation for employees; 4) provide funds for state agencies to curtail poaching; and 5) adopt a poaching clause in union contracts. Draft Plan, Appendix I at 135.

The BLM thus reserves the right to determine private surface use in conjunction with mineral leasing. ⁶ The concept seeks to accomplish mitigation under NEPA by means inadequate for that purpose. Moreover, the means create anomalies in BLM regulations.

On split estate lands, surface use has already been dictated to a large degree by the private owner. While BLM has

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⁶The Draft Plan and EIS also states that where necessary to protect other resource values and to assure access to federal lands, easements and protective covenants will be imposed upon transferred patents. This is aimed primarily at patents granted for land disposal purposes. But to the extent BLM may wish to impose such restrictions on mineral patents, it is without authority to do so in the absence of specific statutory authority to withhold a reservation or exception.

the authority by virtue of nondiscretionary statutes to protect endangered species and bald eagles, and to regulate for conservation of oil and gas, it lacks any power to control privately owned surface uses. The only way to acquire such authority is to reach an agreement with the surface owner. Since the BLM does not own or control the surface it has no interest to protect.

BLM's authority to effect NEPA mitigation extends only so far as it has legal control over the mitigation measures. See E.g. Preservation Coalition v. Pierce, 667 F.2d, 851 (9th Cir. 1982); Friends of Endangered Species v. Jantzen, 760 F.2d, 976 (9th Cir. 1985). A federal agency may only assert control as far as the law permits. BLM is not in a position to dictate surface use to private owners or to impose stipulations to protect privately owned surface values.

Even as a matter of policy, the imposition of mitigation measures on private surface is a poor idea. First, the BLM has scrupulously avoided mediating between lessees and surface owners. The imposition of mitigation measures upon private land places the BLM in the very position that it has sought to avoid. Second, the BLM is essentially claiming the right to mitigation for the predicted displacement of wildlife and other resources from private lands. However, the BLM has steadfastly refused to give credit for the private owner's provision of

habitat on his private lands when assessing impacts on federal land and imposing terms and conditions for uses of federal land. This policy contradicts past policies, thereby creating anomalies that cannot be reconciled.

This pervasive regulation of private surface is beyond the scope of both the authority and duty of the BLM as defined by FLPMA. The concept represents federal zoning of private land and must be eliminated.

IV. RESTRICTIONS ON THE USE OF RIPARIAN AREAS MUST BE CONSIDERED ON A CASE-BY-CASE BASIS AND SHOULD NOT BE APPLIED TO GRAZING PERMITS

The Draft Plan states that no disturbance of riparian vegetation will be allowed except for essential road and utility crossings and that all leases, permits, and rights of any will have a stipulation to that effect. Draft Plan at 11. This stipulation is unduly restrictive and should be considered in light of site specific circumstances. Among others, it has the potential to severely affect grazing permittees.

BLM leases 53,420 acres in North Dakota for grazing. This acreage is divided into 97 allotments with 9751 AUMs. Draft Plan at 46. Despite the fact that over 1,000,000 cattle graze in the western half of North Dakota, not a single allotment is in the (I) or unsatisfactory condition category. Draft Plan at 10, 45. Restrictions on access to riparian areas means fencing

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and development of new sources of water for livestock. Furthermore, cattle are not inclined to eat the vegetation in riparian areas, preferring shorter grasses. It is, rather, the wildlife that consumes riparian vegetation. Damage caused to riparian areas by animal feeding is more appropriately attributed to the mule deer, white tail deer, and pronghorn that, together, approach a population of 9.5 animals per square mile in the resource area. Draft Plan at 45.

V. THE INTERDISCIPLINARY TEAM WAS NOT REPRESENTATIVE OF THE VALUES INVOLVED AND THE ISSUES IDENTIFIED AS REQUIRED BY REGULATION

Regulations at 43 C.F.R. § 1610.1(c) and 40 C.F.R. § 1502.6 are clear. Preparation of an EIS is an interdisciplinary process and the expertise of the preparers must reflect the issues and values to be addressed. Two of the four primary values addressed in the Draft Plan and EIS are coal leasing and oil and gas leasing. Yet there was only one preparer out of thirteen who could be considered expert in oil and gas geology from the information available in Chapter Five. None of the team's credentials indicates expertise in coal mining. Draft Plan at 94-95. This situation must be remedied. The lack of an expert in coal production perhaps explains why, when

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Alternative B has more coal available to be mined than does Alternative C, these two alternatives do not differ at all in the economic impact of mining.⁷ Draft Plan at 72, 81, 82.

VI. WILDLIFE DATA IS INADEQUATE TO SUPPORT THE DECISIONS MADE.

A myriad of wildlife stipulations on oil and gas leases are proposed by the Draft Plan and EIS. And yet no wildlife inventory for seasonal use has been completed. Draft Plan at 10. Stipulations for elk and bighorn sheep are set out in detail, yet to the knowledge of the BLM there is no elk winter range or calving habitat and no bighorn sheep winter range in the resource area. Draft Plan at 19, 146. In fact, there are evidently few, if any, bighorn sheep in the area. Draft Plan at 59. While site specific consideration of wildlife habitat will of course reveal more refined data, decisions concerning the environmental effects of various activities on wildlife have been made in the absence of useful data.

In short, the requirement for a systematic, interdisciplinary approach to land use planning based on useful

⁷Although minor, the identity of impact suggests a lack of reasonable alternatives which is required by the National Environmental Policy Act, 42 U.S.C. § 4321 et. seq.

inventory data and information collection, required by FLPMA at 43 U.S.C. § 1712(c)(2) and by regulation at 43 C.F.R. § 1610.4-3, has been disregarded. A meaningful analysis of the management situation based on fact and consistent with multiple use principles is required by 43 C.F.R. § 1610.4-4. But in the absence of decisions based on fact no such analysis can legitimately have occurred. The Draft Plan is therefore arbitrary.

VII. THE ENVIRONMENTAL IMPACTS OF COMMODITY DEVELOPMENT ARE OVERSTATED.

Given the high degree of mitigation and reclamation required by both BLM and the State of North Dakota, the negative environmental impacts associated with commodity development by the Draft Plan and EIS are significantly overstated. In fact, based on information contained in the Draft Plan itself, it is safe to say that any impact will be minimal to slight.

Oil and gas exploration and development, for instance, is said to impact recreation and visual resources by limiting hunting and presenting a long term visual intrusion. Draft

Plan at 25. Furthermore, the standard stipulations alone, it is said, are inadequate to protect wildlife. Draft Plan at 69. But in the preferred alternative, standard stipulations are augmented by special stipulations to protect wildlife. Draft Plan at 78. Furthermore, reclamation of commodity producing sites improves habitat diversity. Draft Plan at 132. Thus, even without the special stipulations⁸ the end result is to the benefit of hunters and wildlife. Visual standards, up to and including camouflage, are imposed on oil and gas leases to protect the visual resource.⁹ Draft Plan at 80. The impact of oil and gas exploration and development on soils and hydrology is characterized by the Draft as slight and minimal respectively. Draft Plan at 66, 67.

⁸Which, as discussed earlier, are not based on a factual analysis of the wildlife resource.

⁹Again, it would appear that this surface use restriction will be applied on non-federal surface estate. In these circumstances this mitigation measure is even more absurd than others when compared to the BLM's conclusion that a coal fired power plant will be of benefit to the visual resource as a landmark and to break up an otherwise monotonous horizon. Draft Plan at 135.

The effect of mining on wildlife results from the degradation of native prairie and wooded draws. ¹⁰ Draft Plan at 131. But this conclusion does not take into account that 70% of the land in Coal Study Areas is cropland which can be reclaimed and does not have the characteristics of the habitat for wildlife. Draft Plan at 49.

The negative social impacts attributed to commodity development -- fragmentation of the community, crime, overcrowding -- overstate the problem. Draft Plan at 26. In a day of agricultural collapse and relatively high unemployment, the social benefits of employment opportunities, social and economic expansion and diversity, and increased tax revenues, far outweigh the meager, and really speculative, disadvantages that can be identified. Draft Plan at 51, 52, 81, 82.

The Draft Plan's attempt to blame poaching and harassment of wildlife on increased access as a result of legal and legitimate endeavors is unreasonable. Draft Plan at 137. The presence of a road, for instance, does not force an individual to poach. Legitimate activity should not be held accountable for the criminal acts of others.

¹⁰The Draft plan concludes that there is no formally designated habitat for threatened and endangered species, nor are there any threatened and endangered plant species in the resource area. Draft Plan at 43, 44. The preferred alternative has no impact on threatened and endangered species. Draft Plan at 77. Because of their absence from the resource area, together with mitigation required by statute, no alternative could adversely impact threatened and endangered species.



United States Department of the Interior
NATIONAL PARK SERVICE

ROCKY MOUNTAIN REGIONAL OFFICE
655 Perimeter Street
P.O. Box 25287
Denver, Colorado 80225

IN REPLY REFER TO:

L7619 (RMR-PP)

MAR 25 1987

CONCLUSION

The Foundation urges the correction of the Draft Plan as suggested in these comments. It is hoped that the BLM will undertake to resubmit the Draft Plan for public comment upon those aspects of the planning process heretofore not available for review.

Cordially,

Matthew Y. Biscan

Matthew Y. Biscan
Mountain States Legal Foundation

Memorandum

To: Mark Stiles, Project Manager, Dickinson District Office,
Bureau of Land Management

From: Associate Regional Director, Planning and Resource Preservation,
Rocky Mountain Region

Subject: Draft North Dakota Resource Management Plan/Environmental Impact
Statement, Dickinson District Office, Bureau of Land Management
(DES 86/0049)

This memorandum constitutes National Park Service (NPS) comments on the subject draft Resource Management Plan/Environmental Impact Statement (RMP/EIS), prepared by the Bureau of Land Management (BLM). We have arranged our comments in the order of the individual environmental conditions or resource management programs presented in Chapter IV - "Environmental Consequences."

We appreciated the opportunity to comment on this well-organized draft Resource Management Plan/Environmental Impact Statement, and we look forward to working with you to resolve mutual concerns as the final document is being prepared.

Richard A. Strait

Richard A. Strait

Enclosure

DRAFT NORTH DAKOTA RESOURCE MANAGEMENT PLAN/
ENVIRONMENTAL IMPACT STATEMENT

DICKINSON DISTRICT OFFICE
BUREAU OF LAND MANAGEMENT

Air Quality

Air quality is a special concern of the National Park Service (NPS) because Theodore Roosevelt National Park is a Class 1 air quality area. Air quality modeling has determined that the Class 1 sulfur dioxide (SO₂) increments for the park have been exceeded. Scientific examination of SO₂ sensitive plant species in the park indicate that present levels of that pollutant are reaching the threshold at which damage may occur. That threshold may be reached with any additional development of SO₂ sources (oil and gas wells, mine-mouth coal-fired power plants) in the vicinity of the park.

The draft Resource Management Plan/Environmental Impact Statement (RMP/EIS) has identified areas in the vicinity of the park for both oil and gas and coal development. Because the coal is primarily lignite, which is difficult to transport, power plants utilizing the lignite would have to be built near lignite mines. The NPS will review any future individual oil and gas or coal/power plant proposals and permit applications near the park for their possible adverse impacts on SO₂ sensitive resources in the park.

Because the SO₂ increments are exceeded in the park, potential lease applicants should be aware that NPS certification of no adverse impacts on park air quality related values would be required as a condition of receiving necessary air quality permits. We have enclosed language the NPS recommended be included in the Bureau of Land Management (BLM) Notice of Sale for the South Wabau-Beach tract of the Round One Fort Union Coal Lease Sale (July 29, 1983, memorandum to the Fort Union Project Manager). The enclosure discusses a coal lease applicant's responsibilities under the Clean Air Act, including NPS certification of no adverse impact, and the limited alternatives available for obtaining an air quality permit.

In 1983 it was determined that three coal tracts proposed for leasing in the Fort Union basin near Theodore Roosevelt National Park would cause SO₂ concentrations at the South Unit of the park to be exceeded. The NPS Air Quality Division did a study which determined that no unacceptable adverse effects on air quality related values were expected to occur from coal development associated with three permit proposals for coal and three permit proposals for natural gas processing. However, they did find that SO₂ concentrations from those proposed facilities approached the threshold levels known to produce effects on certain sensitive plant species in the park.

The draft RMP/EIS now proposes leasing coal in three additional coal study areas near the park, which will likely increase SO₂ concentrations there.

On page 31, Table 3-1 or Table 3-2 should include a column reflecting the number of times that State or Federal air quality standards were violated per location. In Table 3-2 the two State standards for hydrogen sulfide have the identical footnote, which is incorrect. The 75 ug/m³, 1/2-hour average cannot be exceeded more than twice in 1 year, not twice in 5 days.

Minerals

81M's preferred alternative--identifying 571,388 acres as acceptable for coal leasing and 460,394 acres for oil and gas leasing--poses significant threats to Theodore Roosevelt National Park, Knife River Indian Villages National Historic Site, and Fort Union Trading Post National Historic Site. The draft RMP/EIS inadequately addresses the cumulative effects of such leasing. Coal mining and oil and gas operations are currently regulated on a case-by-case basis. Although individual proposals can be reviewed and modified to minimize immediate and localized impacts, cumulative effects cannot be determined or adequately addressed under the current review system.

No methodology has been devised or implemented to date to adequately assess the cumulative effects that additional coal mining and oil and gas developments would have on the character of the NPS-administered areas in North Dakota. We recommend that 81M provide additional time to assess, and possibly mitigate, the cumulative effects of increased mineral development on NPS units in North Dakota.

The draft RMP/EIS states on pages 56, 65, 74, and 84 that it is highly unlikely that all of the coal and oil and gas acceptable for further consideration would be developed, based on recent downward trends and various restrictions. Therefore, significant impacts to the park units may not even occur with the proposed alternative. However, if 81M's preferred Alternative C is adopted and all the minerals leased, owners of the lease have a right to develop. If this occurs, stipulations could minimize (but not prevent) adverse impacts from taking place to the NPS units. Due to the potential impacts to Theodore Roosevelt National Park, we recommend that Alternative D be modified as follows:

1. Do not lease coal in the following townships, or lease only under the condition that no processing sites be located in these townships.

a. Dickinson Coal Study Area

141N,R99W	141N,R98W	(*tracts already excluded under multiple use trade-offs and unsuitability criteria)
142N,R98W	142N,R99W	
143N,R98W	140N,R99W*	
139N,R99W*	138N,R99W*	

b. Golden Valley Coal Study Area

142N,R105W	141N,R105W
140N,R105W	139N,R105W

c. Elkhorn Coal Study Area

148N,R99W	148N,R98W
149N,R98W	

2. BLM does not justify isolated tracts for disposal in Alternative D, but recommends retaining all public land. Due to the difficulty in managing isolated tracts, we recommend that the surface land section in Alternative C which identifies isolated tracts for disposal replace the surface land section in Alternative D.

In reference to the maps for Alternative D, Map 3 - Dickinson Area has some omissions of the coal screens in the Dickinson Coal Study Area. In Township 141 North, Range 99 West, Sections 20 and 30 are improperly designated as Federal coal open to leasing. Alternatives B and C maps show portions of these sections "screened-out" from further consideration by surface landowner opposition. Given the complexity of the mapping we are sure this is simply an oversight, but we felt it should be mentioned given the proximity of these lands to Theodore Roosevelt National Park.

Only Map K-1 (Oil and Gas Stipulations) shows the location of Knife River Indian Villages National Historic Site; it is omitted on all the management alternative maps for the Beulah Area. On Map K-1, the location of Fort Union Trading Post National Historic Site is omitted. These omissions may limit the ability of the general public to analyze the various alternatives and their implications for these areas.

We are pleased that BLM has proposed special stipulations under Alternatives C and D for any Federal oil and gas leases within 3-1/2 miles of Fort Union Trading Post National Historic Site, to protect the historic viewshed of the area. However, we note that Map K-1 shows the area around Knife River Indian Villages National Historic Site as having special stipulations, under Alternative A only, for future oil and gas leasing. It is our understanding that BLM has determined that no Federal oil and gas is located within 3-1/2 miles of the Knife River NPS unit.

Under Alternative D, a "No Leasing" designation is proposed on 99,497 acres, providing long-term protection to several important natural, cultural, and recreational resource areas. We support this designation for these lands, but believe that the statement on page 85--which says that by removing these lands from leasing "irreversible impacts" will result--is inaccurate. Unless these lands are to be officially withdrawn from oil and gas leasing, an administrative closure can be reassessed at such time as the document is revised. As it is written, the statement provides little flexibility for future considerations and thus could be perceived by some interests as a permanent closure and a negative impact, thereby reducing the desirability of this alternative. We agree, of course, that any drainage from Federal reserves--caused by nearby State or private wells--which might occur during the closure is irreversible in terms of royalties to the Federal government. However, for these areas this may be an acceptable trade-off between resource values.

Soils

We are concerned that coal mining on slopes of 25-30% may be difficult to reclaim and therefore have high erosion potential. Such erosion could affect productivity of the reclaimed area and add to stream siltation problems, including drainages into parklands. On page 111, the draft RMP/EIS states that "... industry has successfully reclaimed small areas of extreme slope." While it may be possible to reclaim small areas of extreme slope, the final plan should reevaluate the inclusion of areas over 20% slope for further consideration. In this regard, on page 34 the document states that 24% of the surface over Federal coal in the tracts is hilly, with steep slopes greater than 15%. The Soil Conservation Service Land Capability Classes (LCC's) lists slopes greater than 15% in LCC's VII and VIII. LCC's VII and VIII are listed as either having a low potential for reclamation (LCC VII), or being unsuitable for reclamation (LCC VIII).

The draft RMP/EIS states that 79,478 surface acres above Federal coal are on slopes greater than 30% and 165,509 acres are on slopes between 15% and 30%. Alternatives A, B, and C propose mining on slopes up to 30% and Alternative D states that no slopes over 15% will be mined. It is our recommendation that no slopes over 15% be mined because of the difficulty in reclaiming the land. On page 74, the document states that most of the 165,509 acres on slopes between 15% and 30% have already been excluded from other coal screening criteria. However, the actual number of acres excluded are not specifically identified in the draft RMP-EIS.

Hydrology

Buried valley aquifers are afforded protection under Alternatives C and D. Because large-scale coal mining can severely disrupt ground water aquifers on which most farms, ranches, towns, and the various NPS units depend, the NPS wishes to be consulted on special aquifer stipulations to be incorporated on any leases in the Dickinson and Elkhorn Coal Study Areas (CSA's).

There is some discrepancy in the draft RMP/EIS on protection of buried valley aquifers between Alternatives C and D. Under the summary section, Alternative C mentions protection of 12,318 acres of buried valley aquifers and Alternative D does not identify any acres for protection. On page 16, under coal leasing, Alternative C does not mention protection of aquifers. On page 19, under coal leasing, Alternative D mentions protection of buried valley aquifers by excluding the areas from coal leasing, but no acres are identified. In the table on page 23, Alternative C includes protection of 12,318 acres, but Alternative D does not identify any acres for protection. On page 76, Alternative C mentions 12,318 acres, and on page 86, Alternative D identifies 70,809 acres for protection of buried valley aquifers. However, Appendix F, on page 125, identifies 110,120 acres protected under Alternative D. The document needs to be corrected in the various sections to ensure consistency.

Several rivers flow through or adjacent to the various NPS units and water quality is an important consideration. Prevention of coal mining impacts from acid mine drainage and increased sediment loading should be addressed in general in this plan and specifically in any future coal leasing program and

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associated National Environmental Policy Act (NEPA) documents. With the number and acreage of CSA's upstream from Knife River Indian Villages National Historic Site along the Knife River, there is significant water quality degradation potential.

Vegetation

Woody draws and wetlands adjacent to parklands are valuable wildlife habitat and key watershed areas. We believe such areas exceed the value of coal and oil and gas reserves, and should be excluded from further consideration for leasing. Alternative A identifies 47,373 acres of woody draws to be impacted from coal development, Alternative B identifies 29,387 acres, Alternative C identifies 16,771 acres, and Alternative D identifies 6,117 acres.

Wildlife

The protection of wildlife habitat, including woody draws, is maximized in Alternative D and adequate in Alternative C. A greater degree of flexibility is preferable, however, to take into account expanding habitat use by big game species, new raptor nesting sites, and other changes. Such habitat changes may often extend into parklands. The reapplication of the wildlife unsuitability criteria for coal development, and habitat reconnaissance as a part of the oil and gas leasing process, are necessary at the specific activity planning stage.

We recommend that the stipulations pertaining to golden eagles and prairie falcons on page 146 be revised. By simply protecting known raptor eyries and not protecting potential habitat, BLM is not considering possible expansion of a population. Specific habitat requirements should be identified for each species of raptor (e.g. height of eyries, exposure, height of cliff, etc.). Once these parameters are identified for each species of raptor, similar unoccupied habitats should be identified and protected to allow for expanding populations. The peregrine falcon's comeback in recent years is a good example of an expanding population. Because of the success of the recovery program, areas never before documented to have peregrines are now occupied by nesting pairs. Also, eyries that were abandoned in the 1950's have recently been reoccupied.

We question the seven-year break-off point for protection of nests as mentioned on page 146. Old stick nests may survive up to 15 years. If a ledge or tree has been used once by a raptor, the ledge or tree met an ecological requirement for that species, and may be used again years later. Great-horned owls, red-tailed hawks, golden eagles, and ravens have all used nests built by other birds. Previously occupied and potential raptor habitat should be identified and protected to the greatest extent possible. In general, though, we compliment the authors on their extensive efforts to quantify and protect wildlife habitat in the CSA's.

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Lands and Realty

The NPS recommends that the land exchange process as presented in Alternative C should go forward regardless of the management alternative finally selected. The BLM will probably identify some scattered tracts with high cultural or natural resource value which should be retained, but the consolidation of public domain surface would facilitate management of natural, cultural, and recreational resources.

Recreation and Visual Resources

The NPS would prefer the best protection from off-road vehicle (ORV) disturbance to vegetation, soils, and wildlife on public lands adjacent or draining into parklands. We recommend ORV use in the Big Gumbo area and other areas of consolidated public domain lands should be limited to maintained roads from March 1 through June 1, and be limited to roads and trails the remainder of the year, except as permitted in grazing and other leases. Though not mentioned in the draft EMP/EIS, State law prohibits vehicle use off of established roads and trails during hunting seasons.

On August 2, 1979, the President issued a directive which requires that: "Each Federal Agency shall, as part of its normal planning and environmental review process, take care to avoid or mitigate adverse effects on rivers identified in the Nationwide Inventory prepared by the Heritage Conservation and Recreation Service in the Department of the Interior. Agencies shall, as part of their normal environmental review process consult with the Heritage Conservation and Recreation Service prior to taking actions which could effectively foreclose wild, scenic, or recreational river status on rivers in the Inventory."

Since that time, Heritage Conservation and Recreation Service responsibilities with regard to Nationwide Rivers Inventory (NRI) streams have been transferred to the National Park Service.

All or part of three NRI stream segments are found in North Dakota. They are the:

1. Pembina River from the Red River to the Canadian Border which is listed as having outstandingly remarkable scenic, geologic, and wildlife values;
2. Missouri River from Square Butte Creek to the Oliver/Mercer County line and from the Knife River to Garrison Dam which is listed as having outstandingly remarkable scenic, recreational fish, wildlife, historic, and cultural values; and,
3. Little Missouri River from Lake Sakakawea to Marmarth, North Dakota, which is listed as having outstandingly remarkable scenic, recreational, geologic, fish, historic, and cultural values.

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On September 8, 1980, procedures for interagency consultation to avoid or mitigate adverse effects on rivers in the NRI were published in the Federal Register (copy enclosed). These procedures require agencies proposing actions to:

1. Determine whether the proposed action could affect a NRI stream;
2. Determine whether the proposed action could have an adverse effect on the natural, cultural, and recreational values as listed above for the NRI stream segments;
3. Determine whether the proposed action could foreclose options to classify any portion of the inventory segments as wild, scenic, or recreational river areas; and,
4. Incorporate avoidance/mitigation measures into the proposed action to the maximum extent feasible within the Agency's authority.

We cannot find any discussion of how the subject draft RMP/EIS would affect the eligibility and the natural, cultural, and recreational values of the above-listed NRI stream segments. This is probably an oversight, as we can find no indication that either the Nationwide Rivers Inventory or the Procedures for Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory were consulted in the preparation of this document. Questions on the NRI or on the enclosed procedures may be directed to Mr. Duane Holmes at FTS 776-8705 or commercial (303)236-8705.

We recommend extensive revision of the materials on visual resources contained in the draft RMP/EIS. Setting the tone was the statement on page 135 that "large structural features of a power plant or mine would imply a visual importance for orientation, or the stark architectural lines and pure planes of color contrasting with the simple curvilinear landforms of the countryside can be considered positive." Although this may be true to someone who works at the power plant, a visitor to a national park will likely not have a positive impression of a power plant or mine within view of the national park.

We have enclosed language used in the visual resource impact portion of an EIS for a coal mine near Bryce Canyon National Park. It summarizes visitor reactions to mining visible from park viewpoints. This language might be of help to BLM in rewriting this section of the document.

The discussion in Appendix 1 on perception of a power plant is not objective. "Neglecting cultural bias" is an impossibility. The presence of a power plant in the general landscape would be considered positive by some individuals, such as a plant employee, but may be considered negative by others, such as a long-time area resident, who may not feel he needs "relief from a relatively uniform countryside." This paragraph should be expanded to reflect both sides of the issue, if not, we recommend that the discussion be eliminated from the document. As it is written, we feel this paragraph is highly subjective and does not demonstrate the appreciation many people have for the prairie environment. There is no mention in Appendix 1 of plumes that may be produced from coal-powered facilities by the burning of lignite.

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An important visual resource not addressed in the draft RMP/EIS is night sky views of the stars. Because of the relatively flat terrain in western North Dakota, mining operations and power plants developed near NPS units could degrade night sky viewing from within the parks. The NPS recognizes night sky viewing as an important resource. The document should address night sky impacts from potential processing sites.

The draft RMP/EIS states (page 80, second paragraph) that protective buffer zones may be necessary to protect high visual qualities of specific lease proposals or during activity planning around the Missouri Breaks and Lake Sakakawea. We recommend that the three NPS units be considered high resource values for planning purposes, and that operations that would be visible from Theodore Roosevelt National Park, Knife River Indian Villages National Historic Site and Fort Union Trading Post National Historic Site be adequately buffered to minimize the visual intrusion.

Several tracts in the Washburn CSA would create visual impacts to Knife River Indian Villages National Historic Site, as the tops of mining equipment and associated dust would be visible from the park. Because of these impacts, we recommend that the following tracts be dropped from further consideration for leasing:

SW $\frac{1}{4}$ Sec. 32, T145N, R83W
 NE $\frac{1}{4}$ Sec. 02, T144N, R83W
 NE $\frac{1}{4}$ Sec. 10, T144N, R84W
 NW $\frac{1}{4}$ Sec. 12, T144N, R84W
 SE $\frac{1}{4}$ Sec. 04, T145N, R83W

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These tracts are located on the top edges of the Missouri River breaks, at higher elevation than the river bottomlands where the NPS unit is located. As an alternative to deletions, stipulations specifying dust abatement, quick removal of the mineable material and mining equipment from the viewsheds, and timing season of operations to avoid summer mining should be included in any leases for these tracts of Federal coal.

The comments above are made in terms of visual impairment from mining equipment, dust, and facility construction and associated noise impacts only. We are greatly concerned with the Dickinson and Elkhorn CSA's because of their proximity to Theodore Roosevelt National Park, as discussed below.

As a first preference, no Federal coal should be leased for other than small-scale "backhoe" mining operations in that portion of the Dickinson CSA west of U.S. Highway 85 and north of Interstate Highway 94. However, as an alternative, restrictive stipulations would be placed on those tracts which the BLM would recommend for development near Theodore Roosevelt National Park.

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The areas described above are within the viewshed of the Buck Hill and Boicourt Ridge vistas as designated in the approved Record of Integral Vistas for the park (1980) prepared as required in the 1970 Clean Air Act, as amended. The impacts described above could severely affect the visual and aesthetic quality of these vistas if major development occurred.

Also, as a first preference, no Federal coal should be leased for other than small-scale "backhoe" mining operations in those portions of the Elkhorn CSA located in T148N, R99W; and T148N, R98W; Sections 7 (S4), 17 (W4), 18, 19, and 20. However, as an alternative, restrictive stipulations could be placed on those tracts which the BLM would recommend for development near Theodore Roosevelt National Park.

These areas are within the viewshed of the eastern portion of the Theodore Roosevelt National Wilderness Area created by Congressional Act on November 10, 1978, as an addition to the National Wilderness Preservation System. It is incumbent on Federal agencies to maintain the values for which the wilderness areas are established. The Buckhorn Trail (12 miles), which traverses the eastern portion of the wilderness, is traveled by hikers and horseback riders during most periods of the year. On Stevens Plateau the trail offers a panoramic view of the countryside to the north, east, and south. In addition, the Bentonitic Clay Overlook on the park's scenic drive looks east by northeast directly toward the southern portion of the Elkhorn CSA. The view from the overlook was identified as an important visual resource in the 1980 Record of Integral Vistas. Both this overlook and the Stevens Plateau views are located at elevations approximately equal to or slightly higher than the general elevation of the Elkhorn CSA. In addition, leaseable lands within the Elkhorn CSA are within 1/4-mile of the park boundary and 1-1/4 miles of the wilderness area. Development of a large-scale mining operation would severely impact the visual resources of the park and wilderness area.

No major power-generating and/or coal-powered facility should be constructed as a result of Federal coal leasing, or the utilization of Federally-leased coal, within: T141N, R99W; T140N, R99W; T139N (Dickinson CSA); for the Elkhorn CSA: T149N, R98W; T148N, R98W; and T148N, R99W; for the Arnegard CSA: T148N, R101W; and T149N, R100W. Appendix 1 of the draft RMP/EIS presents the scenario of a generic coal-powered end use facility. The description of this generic facility includes a 600-foot stack which could be visible up to 30 miles away (p. 135). A stack of this height, due to Federal Aviation Administration (FAA) regulations, would be required to have several sets of strobe warning lights. A single flashing strobe light on a 300-foot tall radio tower, 1-1/2 miles from the South Unit boundary of Theodore Roosevelt National Park is visible during the day at a distance of 6 miles and at least 18 miles at night. A stack with a much larger diameter and twice the height would have extreme aesthetic impacts from many high points along scenic drives, nature trails, and scenic overlooks. Besides the stack, the structure itself would be huge and serve as a focal point, dominating the surrounding landscape, as indicated above. The generic plant would require adjacent roads, powerlines, surge ponds, and tailspurs. We have proposed excluding construction of such a facility within a minimum 7-to-10-mile distance from the park units. Given the potential visual impacts, we do not believe this is unreasonable.

Cultural Resources

Pages 12 and 13 of the draft RMP/EIS fail to address the situation in which BLM and the North Dakota State Historic Preservation Officer (SHPO) may not agree on the eligibility of a site. It should state what procedures or actions would be taken in the event that the SHPO believes that a site is eligible and BLM believes otherwise.

The document should give an example of a case in which neither mitigation or avoidance of adverse effects to eligible cultural resources may be possible (see page 13, paragraph 2). In the same paragraph, the final sentence--"Further, if the federal undertaking is of great public benefit, in relation to the significance of the cultural resources, damage to or destruction of cultural resources may be considered an acceptable loss."--fails to define who will make the determinations of "benefit" and "acceptable loss." For example, the document should state the degree to which the Advisory Council on Historic Preservation is involved in the determination. While the draft RMP/EIS addresses the identification of eligible cultural resources, it fails to adequately explain how BLM will determine if actions "potentially affect cultural resources" (page 12, column 2, paragraph 2 of the section on Cultural Resources). The document should clearly define the requirements for archeological survey by qualified personnel prior to any ground-disturbing activity on Federal lands or associated with Federal action, as such activity could "potentially affect cultural resources."

On page 61, column 2, last paragraph, "Class II survey" should be explained. In fact, somewhere (perhaps on pages 12 and 13) the full survey process needs to be explained.

On page 62, column 1, paragraph 3, and elsewhere, the draft RMP/EIS makes subjective determinations of the adequacy of data recovery methods--in most cases "to minimize direct adverse impacts." We do not believe that this can be determined except on a case-by-case basis.

On page 62, "Other Mineral Estate," and elsewhere in the document, it is stated that "Standard stipulations require that lands . . . are examined to determine if cultural resources are present . . ." This statement fails to define the nature of the examination and by whom it would be performed.

Also, Alternatives A and D, "Other Mineral Estate" fail to address avoidance by relocation, as provided in Alternative B. Avoidance of damage to cultural sites should be included in all alternatives.

Paleontology

Paleontological remains are an important resource of Theodore Roosevelt National Park. Such resources could extend from the park onto adjacent public lands. On page 13 of the draft RMP/EIS, there is no mention of any provision for pre-Federal action surveys for paleontological resources. Under all alternatives, the document recognizes the lack of systematic paleontological

investigations for CSA's and other lands. All alternatives for "Other Mineral Estate" refer to Montana BLM Standard Stipulations as provision for protection of paleontological resources after discovery and report. In addition, there is the provision for a subjective determination of significance prior to protection or salvage. In "Other Mineral Estate" the plan recognizes the potential "for impacts to occur to significant paleontological resources" (emphasis added) yet dismisses the "risk of impacts" under the Standard Stipulation as "slight." There is, as the plan clearly states, no requirement under the Montana BLM Standard Stipulations to identify paleontological resources "prior to an authorization" for development. Nevertheless, if a survey is to be conducted, and we believe one should be, it should be stated in the plan, along with the requirements of the survey and qualifications of the surveyors. Also, a statement is needed as to who will make the "evaluation and management decision" concerning the disposition of the resources discovered during construction.

Because, as the draft RMP/EIS points out, there is such a lack of information available to North Dakota land managers regarding paleontological resources, BLM might consider developing a site-specific summary document of geological resources similar to the BLM document recently prepared for Colorado. ("Faults, Fossils, and Canyons;" Geologic Advisory Group, 1986)

150 The document does not discuss North Dakota State laws regarding paleontological resources. According to one source, the State considers paleontological resources to fall into the category of cultural resources.

Given the information in the draft RMP/EIS, it would appear that paleontological resources could be adversely affected by the lack of pre-action surveys to identify such resources; this would increase the likelihood of destruction or damage prior to discovery/recognition. Furthermore, the plan fails to provide for professional evaluation of the "significance" of paleo-resources in project areas prior to the decision on disposition.

Lease Stipulations

This was not an individual environmental condition or resource management program with a major heading in the "Environmental Consequences" section of the draft RMP/EIS. However, as we have already expressed (especially with regard to air quality) lease stipulations are a special concern for NPS.

Lease stipulations in sensitive areas are not always sufficient protection for park resources. The document should discuss the use of stipulations, including technical feasibility, implementability, and enforceability. Additionally, the document should discuss what measures will be taken if resource damage occurs because stipulations either failed or were not implemented.

For example, in 1982, an oil well was drilled within one mile of Natural Bridges National Monument in southeast Utah. The well was not a producer and standard procedures were followed in abandoning the well. In 1985, a park

ranger hiking in the area noticed a large vegetation kill zone in a woody draw below the old drill pad. It was soon discovered that the well had been improperly plugged and brine water from the well was contaminating soil in the draw and killing the vegetation. It was also discovered that the park's water well, which was one mile from the oil well, was contaminated with the brine water. The brine water had been slowly contaminating the freshwater aquifer under the monument for several years. It should be noted that the Natural Bridges staff was opposed to the drilling of the oil well in 1982, but were assured that stipulations would prevent negative impacts to the environment.

153 Additionally, the draft RMP/EIS (page 21) states that special stipulations identified in the plan generally represent the minimum restriction necessary to protect sensitive resources (emphasis added). Stipulations are specific requirements, based on mitigation measures that have been identified and developed in the environmental review process. Stipulations are inserted into mineral operation proposals for the purpose of preventing or mitigating detrimental effects to resources. Sensitive or critical resources should have maximum (not minimum) restrictions necessary to protect them.

An example of a minimum stipulation in the document that may not help the resource is the stipulation proposed to protect bighorn sheep wintering ranges. Protection of the winter range will work as long as exploration activities cause minimum damage to the environment and no oil or gas well goes into production. However, if a well becomes a producer, or seismic activities cause significant disturbance, the bighorn sheep could abandon the range. Examples include the documented negative results of oil and gas exploration and development on caribou in Alaska and bighorn sheep in Nevada. The key to bighorn sheep management is habitat protection. If potential winter ranges for bighorn sheep are identified, protection of the habitat must be year round.

Summary Comments

Given the inherent difficulty in addressing cumulative impacts, EIM selection of a modified Alternative D would provide additional time to assess the cumulative effects of increased mineral development on Theodore Roosevelt National Park, Knife River Indian Villages National Historic Site, and Fort Union Trading Post National Historic Site. We recognize that the final RMP will provide a 10-to-15-year overview, and that proposed large-scale projects would be subjected to specific environmental analysis. Nevertheless, selection of a modified Alternative D would allow BLM to amend, revise, or replace the RMP at a later date, after thorough cumulative impact analyses are completed, without jeopardizing NFS and other resources in the interim.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET—SUITE 500
DENVER, COLORADO 80202-2405

Ref: 8PM-EA

Dean Stepanek, State Director
Bureau of Land Management
222 North 32nd Street
P.O. Box 37800
Billings, Montana 59107

Dear Mr. Stepanek:

In accordance with the our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the Region 8 Office of the Environmental Protection Agency (EPA) has completed its review of the Draft North Dakota Resource Management Plan and Environmental Impact Statement. The following comments are for your consideration as BLM moves forward on this recommendation for multiple use management on public lands.

We note that the proposed action includes consultation with state and federal wildlife management agencies regarding mitigation aspects of oil and gas leasing, coal leasing, and surface land management. Such consultation is more likely to be achieved as proposed if specific agreements are reached with these agencies. Through such agreements, early identification of resource conflicts and means to avoid conflicts can be obtained. We suggest that the final EIS specifically state how the consultation process will take place. For instance, certain isolated tracts have been marked as important to wildlife habitat and these tracts could be transferred to management agencies capable of maintaining and enhancing wildlife habitat values. BLM should describe how it will notify interested parties regarding future resource development actions affecting such selected tracts. Perhaps it would be useful to report periodically, say every five years, to these agencies summarizing the actions proposed and taken regarding isolated tract management.

With respect to describing the existing environment, we think the EIS is deficient in its description of the conditions of grassland conditions. The previous grazing EIS for North Dakota public lands also was deficient in this regard. In recognition of the practical difficulties in protecting native woodland from overgrazing, BLM should further emphasize the need to develop alternative water sources to attract cattle away from these critical areas.

EPA suggests that the final EIS analyze compliance with the State ambient and emission standards for hydrogen sulfide. A table showing the baseline air quality conditions for each existing major oil and gas field would be appropriate. A brief description of each major producer's means of compliance with the State-promulgated criteria would be useful to assess the impact of current and future gas sweetening operations.

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It appears that little field work has been accomplished to date to document the possibility of endangered or regionally rare plants. There appears to be the opportunity within each coal study area and oil and gas lease area to have these surveys completed prior to lease area selection. The final EIS could include a description of the opportunity for these surveys and the procedures to follow if important rare plants exist upon potential coal or oil and gas lease areas.

BLM Riparian Area Management Policy describes riparian areas as among the most productive and important ecosystems on the public lands, affecting essentially all other resource uses and values, and thus deserving special protection. (See "BLM Riparian Area Management Policy," January 26, 1987.) EPA supports this policy and the water quality benefits that may result from healthy riparian lands. Even though there are very few riparian areas on the North Dakota public lands, perhaps all of these areas could be selected as demonstration areas consistent with the BLM policy guidance. Successful protection of riparian areas on the public lands may provide a useful example to the private land owner.

According to the procedures EPA uses to rate the adequacy of a draft EIS, the Draft North Dakota Resource Management Plan and Environmental Impact Statement will be listed in the Federal Register as Category EC-2 meaning EPA has environmental concerns with the proposed action and requests additional information. EPA suggests that the EIS be improved to address the items listed above. Please contact Mr. Weston Wilson of my staff at FTS 564-1703 if we can provide further explanation of these comments.

Sincerely,

Robert R. DeSpain
Robert R. DeSpain, Chief
Environmental Assessment Branch

cc: Bill Dickerson, EPA, Washington, D.C.
Mike McKenna, North Dakota Game and Fish Dept. Bismarck
Stan Zimmler, U.S. Fish and Wildlife Service, Bismarck

NORTH DAKOTA GAME & FISH DEPARTMENT

"Variety in Hunting and Fishing"

100 North Burdick Expressway
Bismarck, North Dakota 58501-5095
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March 24, 1987

Mark Stiles
Bureau of Land Management
Dickinson District Office
P.O. Box 1229
Dickinson, ND 58602-1229

Re: Comments on Draft
RMP/EIS.

Dear Mark:

We have reviewed the Draft Resource Management Plan and Environment Impact Statement (DRMP/EIS) for North Dakota. Our comments address the five major issues as follows:

- 1) Coal Leasing
- 2) Land Pattern Adjustment
- 3) Oil and Gas Leasing
- 4) Off-Road Vehicle Use
- 5) Surface Management/Livestock Grazing

We have directed our comments where appropriate for each issue to three aspects of each program - A) past coordination and general perspective; B) support of or suggestion for change in proposed management; C) additional planning and coordination needs in activity planning and implementation stages.

1) Coal Leasing

A) Our position on coal leasing has been developed through six years of intensive involvement in this complex, controversial issue. ND&F Department has been convinced from the beginning that coal leasing and subsequent development could take place in N.D. on a very significant scale without excessive adverse impacts to wildlife and related recreation. From the beginning we have accepted that both national energy needs and broad economic benefits dictate that substantial quantities of Federal coal in N.D. would be made available for leasing and development. The question from our perspective has always been one of how to insure that coal development avoid critical habitat, minimize impacts to important habitats and insure reasonable resource trade-offs.

Dale L. Hanger
COMMISSIONER

Charles H. Schroeder
DEPUTY COMMISSIONER
SPN 000

Mark Stiles
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March 24, 1987

In cooperation with BLM and the USFWS, our Department was involved in comprehensive habitat typing and field review of all CSA's from 1981-1984. In cooperative application of criteria 9, 10, 11, 12, 13, 14 and 15, a very thorough and detailed assessment of wildlife habitat and potential wildlife populations within all CSA's was accomplished. This information ultimately allowed a very reasonable application of wildlife criteria and also contributed to multiple resource screening and development of habitat thresholds for each CSA. Transmission of and coordination on information relating to application of wildlife criteria and final recommendations on multiple resource screens and wildlife thresholds was accomplished over a six year period and involved numerous formal and informal communications and meetings.

B) The North Dakota Game and Fish Department supports preferred alternative C with regard to coal leasing. While alternative D offers a greater withholding of leaseable lands and more extensive protection of wildlife habitats, we believe alternative C provides adequate protection and offers an overall balance which is much more likely to be successfully implemented.

In addition to lands withheld under the unsuitability criteria, we believe the key aspects of the preferred alternative with regard to wildlife resource protection are the application of the multiple use screens and the establishment of habitat thresholds within each CSA. Through these mechanisms important wildlife habitats within each CSA are sufficiently protected to insure that current wildlife populations within each CSA and its general surrounding area will not be jeopardized. Substantial impacts to local wildlife populations may occur within certain CSA's during early places of development, but because of habitat thresholds and with stipulated reclamation of other important habitats a certain minimum habitat retention is assured while mitigation through reclamation occurs. In light of the substantial economic, legal and political pressure that is likely to accompany future coal development initiatives, we believe this flexible approach to wildlife resource protection is appropriate and, possibly, the only viable way to proceed with coal leasing in North Dakota.

C) The entire process of moving coal leasing forward to the RMP/EIS stage has been very challenging for our Department. We recognize the difficulty of front end loading any planning process to the extent that this has been. Data collection has resulted in a very lengthy process, but has for the most part been successfully completed.

There is, however, one additional wildlife data need for future screening use that has not been completed. That relates to rare plants and animals and exemplary natural communities relative to the

State of North Dakota. We realize that the incompleteness of available data and the absence of officially designated state lists did not permit earlier screening. We further recognize that existing criteria, multiple resource screens and wildlife threshold screens will overlap with rare plant and animal screens. This should mean that additional screening will identify only a few and limited potential conflicts. We believe that an adequate, appropriate and timely additional screening for these resources can be accomplished in activity planning subsequent to tract delineations and in any applications to lease.

Relative to the RMP/EIS we, therefore, recommend the following additions to the selected alternative.

- The RMP should document the need to screen for rare plants and animals and exemplary natural communities during activity planning. The scope and significance of impact to any species occurrences would then be evaluated and additional areas protected if necessary. Additionally the RMP should document the need for activity planning to screen for areas designated under state natural area registry programs.
- The final RMP should also document that listings and appendices of Federal T/E and State rare plant and animal species will be updated at activity planning stages and used for final screening.
- Finally, the RMP should acknowledge on page 45 under Other Nongame Species that there is a considerable body of information on known occurrences of rare plants and animals and exemplary natural communities that will be consolidated, updated and used in activity planning stages.
- The NDG&F Department in cooperation with N.D. Public Service Commission will continue coordination with BLM to insure that the best available information on these resources can be used in a timely screening.

2) Surface Lands

- A) NDG&F Department involvement in the land pattern adjustment program has also spanned several years. In 1983, our Department conducted a comprehensive review of BLM surface lands to identify significant wildlife resource occurrences, to recommend lands that might be suitable for transfer to or cooperative management by our Department or other public agencies, and to suggest areas where BLM might consider retention and consolidation of ownership to enhance public land management opportunities.

In 1986, at BLM's request, our Department expanded our review to include identification of known and likely occurrences of rare plants and animals and exemplary natural communities. This review also

included identification and nomination of three tracts that might be suitable for designation as Areas of Critical Environmental Concern (ACCE).

During the past 4-5 years, we have worked with BLM to suggest means by which their unmanageable land pattern might be adjusted without divesting the public of important values and opportunities. We have supported and, we trust, helped to develop the concept of land exchanges to consolidate BLM lands into manageable units that might incorporate into public lands important wildlife values on adjacent private land as an equitable trade for lands of disposed of. We have urged BLM to approach this problem cautiously since a partial land pattern adjustment would do little to meet their needs, but might result in disposal of only those lands most vulnerable to surface ecosystem destruction via cultivation.

- B) We are satisfied that BLM has adequately considered the information and recommendations we have provided with regard to protection of game and high interest wildlife resources in land pattern adjustments. We understand and support BLM's desire to simplify its land pattern. While we are doubtful that many of the small scattered parcels can be sold and urge BLM to proceed slowly with disposals, we generally agree that most BLM scattered parcels offer no significant public land management opportunities and privatization of most parcels would, for the foreseeable future, have a neutral or positive overall effect. We believe that the proposals under alternative C provide the most reasonable scale and means to proceed with land pattern adjustments.

While we concur with BLM's preferred alternative proposal, we caution that rare plant and animal information used to screen parcels for disposal was and remains incomplete. It was not feasible for us to do a tract by tract review of disposal categories and priorities for each alternative for all tracts which maybe disposed of. We support the general guidelines and criteria, set forth in Appendix N, under which land pattern adjustments and disposal decisions were made. We recommend, however, that the RMP be amended under alternative C to state that the 22,819 acres of lands approved for disposal will be additionally screened during activity planning to insure that significant rare plant and animal resources or exemplary natural communities are not jeopardized through disposal. We believe this would serve as a final, detailed checkpoint for disposal of lands that may support appreciable natural resource values.

- C) Continued coordination during activity planning as lands are made available for disposal or exchange will be essential to completion of rare plant and animal screening and data collection. Additional information from BLM tracts visited by our staff for the first time in 1986 will be sent under separate cover. Also, we will be sending

a summary of information on the Big Gumbo area potentially including nomination of a portion of that area for designation as an area of Critical Environmental Concern (ACEC).

We further recommend that the BLM tract recommendations sent to BLM in May, 1986, addressing 15 known and 26 possible occurrences of rare plants and animals and exemplary natural communities be further considered in the RMP. It is appropriate to acknowledge existence of this information under Appendix N under Disposal Criteria No. 4, with some indication that management transfer for the highest priority parcels will be pursued as soon as possible.

3) Oil & Gas Leasing

A) During development of issues and early draft places of the RMP and over the past 4-5 years, our Department has worked with BLM on numerous occasions on a variety of oil and gas leasing and development issues. In April, 1985 we formally provided input to the oil and gas leasing issue as addressed in the RMP. We believe we have adequately familiarized BLM with our concerns and suggestions with regard to wildlife resource impacts and necessary protective considerations.

Our position with regard to oil and gas leasing on the areas covered by this RMP must necessarily consider a much broader perspective. Throughout perhaps 95% of North Dakota's surface lands, oil and gas leasing and development creates little significant impact to wildlife. Only in those few heavily wooded, rugged, undeveloped portions of the state and on major lakes and rivers, is there potential for significant conflicts with sensitive wildlife species. The badlands and breaks of the Little Missouri and Missouri Rivers in western North Dakota are among the few oil developmentally sensitive parts of the state. It is, from our perspective, an unfortunate fact that this is also that portion of the state which contains very significant oil and gas reserves. Badlands portions of western N.D. have already undergone substantial development and wildlife and related aesthetic and recreational values have been substantially negatively impacted. We believe, therefore, that all future federal oil and gas leasing decisions must thoroughly consider and be tempered by the need to minimize cumulative future impacts to this limited sensitive area.

We have, over the past six to seven years, worked exhaustively with the U.S. Forest Service and BLM to develop an appropriate oil and gas leasing program for the Little Missouri Grasslands which encompasses much of this area. In our opinion tremendous misjudgements were made in past federal leasing programs. Past decisions and policies have led to excessive, unnecessary impacts and continue to greatly restrict opportunities to improve the situation. Opportunities to

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appropriately protect surface resources are largely limited to withholding or adding stipulations to leases as they expire. "No leasing" decisions are generally met by stern opposition and are difficult to justify. We believe, therefore, that NSO stipulations should be expanded where ever appropriate. Throughout most if not all BLM lands, NSO stipulations would allow development, but would protect remaining undisturbed crucial habitats. In light of the extensive amount of land already held by producing leases, the total relative amount of land affected and the added expenses of offset drilling are appropriate and necessary restraints on cumulative impacts on all federal lands in western North Dakota.

B) None of the alternatives for oil and gas leasing strikes what we believe to be an appropriate balance between efficient development and necessary protection of wildlife resources. In our view alternatives A, B & C do not provide necessary wildlife protection, while alternative D prevents leasing over an excessively large area. Alternative C comes closest to an appropriate balance and we, therefore, recommend the following minor changes be made in that alternative.

1) Elk calving range and bighorn sheep lambing areas, when and if identified, should either not be leased or leased with NSO stipulations which provide a 1/2 mile buffer around identified areas.

2) Leasing in rugged badlands topography in the Lost Bridge area should allow NSO stipulations to prevent road building and well siting in narrow, wooded badlands canyons. The USFS has developed standards and guidelines for NSO leasing in identical areas of the L.M.N.G.. We recommend the BLM adopt similar guidelines and include under alternative C a general commitment to allow NSO stipulations on portions of the Lost Bridge area which are unsuitable for road and well construction.

3) Federally designated natural areas and state-dedicated nature preserves should be included in areas where NSO stipulations are allowed. The following is a partial list of township-range information which should be added to the N.D. lease stipulation map.

Federal:	Site Name	County	Township-range
	Fisher Lake	Stutsman	T.142N., R.67W
	Rush Lake	Cavalier	T.163N., R.62W
	Sibley Lake	Kidder	T.140N., R.72W
	Big Top, Two Top Mesas	Billings	T.144N., R.101W

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State:	Cross Ranch	Oliver	T.143N., R.81.82W
	Gunlogson Arboretum	Pembina	T.142N., R.81.82W
	Head-of-the-Mountain	Sargent	T.161N., R.55W
	Sentinel Butte	Golden Valley	T.129N., R.54W
			T.139N., R.104W

Because this is not a complete listing we recommend the RMP include a statement to allow the addition of such areas as they are made available.

4) Off-Road Vehicle Use

A) In April, 1985, the North Dakota Game and Fish Department commented in specific on Off-Road Vehicle Use. In North Dakota we view this as a very minor issue. We are unaware of any significant demand for ORV use or any substantial surface resource damage related to ORV use on BLM lands.

B) In light of the almost non-existent demand and very low ORV use, we see no reason BLM land should be open to ORV use. We realize ORV restrictions would be largely unenforceable. Minor instances of unauthorized ORV use already occur and will continue to be undetectable and presently cause no significant harm. None the less, appreciable ORV use on any BLM lands in North Dakota would probably create significant vegetative damage, soil erosion, wildlife harassment or conflict with other uses. To open the Lost Bridge area and all scattered tracts outside the Big Gumbo area will send a false message to the public, will discourage BLM staff from problem identification, and will make closure of conflict areas more difficult and controversial. We, therefore, recommend all BLM lands be closed until such time as unauthorized use or specific demands dictate a site specific impact assessment and a decision to open certain lands.

At a minimum, we request tracts in the Lost Bridge area be closed to ORV use. This badlands area contains primarily thin, highly erosive soils, steep slopes and rugged terrain. The presence of elk and other sensitive wildlife in the area further dictates that ORV use should be discouraged even if it cannot be actively eliminated through enforceable regulations. ORV use in the Lost Bridge area should be authorized only if there is a specific demand and an environmental assessment determines there would be no significant conflicts.

C) Continued coordination based on identifiable demand or detectable unauthorized use will be essential to identifying areas that should appropriately be made available for ORV use.

5) Surface Management/Livestock Grazing

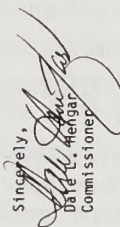
A) In April, 1984, our Department commented extensively on the Draft North Dakota Grazing Environmental Impact Statement. Our comments were highly critical of that document and recommended a complete rewrite of the Draft EIS. In spite of our criticisms and without a redraft or significant change in the final EIS, BLM approved that document and issued a Record of Decision authorizing the EIS and preferred range improvement alternative in March of 1985.

The majority of our criticism of the Grazing EIS were based on procedural deficiencies and a lack of data supporting the preferred alternative. Many of our specific comments were responses to what we viewed as unsubstantiated, generalized and often incorrect subjective assessments of habitat conditions on BLM lands and cause and effect relationships between livestock grazing and wildlife habitat conditions.

We recognize that under any feasible alternative, opportunities to substantially improve habitat conditions through livestock management on BLM lands are quite limited in North Dakota. While BLM acknowledged the possible existence of generic problems, our primary objection to the Grazing EIS was that it did not identify specific existing problems.

C) Our previous objections notwithstanding, we believe the Grazing EIS establishes and the RMP carries forward a general management direction for livestock grazing that can lead to improved habitat conditions and better balance in this program. The key to doing so will be increased problem identification and treatment through allotment management planning and other activity planning. NOGAF Department will make staff available to assist BLM in habitat condition assessments and in suggesting wildlife management objectives and priorities through the AMP process.

In summary, the NOGAF Department is generally satisfied with the proposals made in the Draft RMP/EIS. BLM is to be commended for the conscientious job done in the coal leasing proposals. With consideration and addition of the recommendations we have made herein incorporated into the final proposals, we believe BLM will have adequately considered wildlife resources in management planning for North Dakota. We look forward to working with BLM in future planning and implementation stages and offer our assistance wherever possible.

Sincerely,

Dale L. Hendgar
Commissioner

DICKINSON PUBLIC MEETING — JANUARY 27, 1987

- 162 | The BLM should consider excluding the Green River watershed from further consideration for coal leasing due to the potential for future municipal water development.
- 163 | How does the RMP preferred alternative affect the existing oil and gas leasing program?
- 164 | Will special oil and gas lease stipulations be added to existing operations or existing leases?
- 165 | Does the plan propose any special stipulations relating to H₂S flaring?
- 166 | How will the RMP affect the present oil and gas-related responsibilities of the BLM and U.S. Forest Service in North Dakota?
- 167 | How many acres of No Surface Occupancy restrictions are placed on oil and gas leases under the preferred alternative? What types of environmental factors and how large of an area will be protected using No Surface Occupancy stipulations?
- 168 | What kind of success has BLM had in effecting land exchanges?
- 127 | It appears that, logically, Alternative D should include consolidation of scattered tracts. Wouldn't consolidation of scattered tracts and the subsequent enhanced resource management be more consistent with the general Alternative D theme of amenity protection?
- 169 | How are groundwater and aquifers considered in the plan? Important aquifers should be protected.
- 170 | Would the Federal government lease in a bypass situation if the surface owner was against coal mining?
- 171 | What coal leasing options are available to BLM?
- 172 | Why would out-of-state coal companies drop surface lease agreements they have held for many years?
- 173 | What is the chance of North Dakota's oil and gas industry rebounding, and when?

WILLISTON PUBLIC MEETING — JANUARY 28, 1987

- 174 | Who makes the final decision on the RMP?
- 175 | Is the final decision based upon staff and public input?
- 176 | Did we review other RMPs to ensure state-to-state and RMP-to-RMP consistency? Did we handle minerals in the same way as other RMPs?
- 177 | What documents were used to formulate this RMP? Did BLM rely on outdated discussions presented in old plans or use updated information? Factors associated with mineral development have changed greatly since earlier BLM plans were released.
- 178 | Will this plan change our present Notices To Lessees?
- 179 | Do the prescriptions in this plan follow existing state laws? There appears to be a great deal of duplication in state requirements and BLM requirements in relation to oil and gas development.
- 167 | Is most of the acreage of federal oil and gas receiving special lease stipulations under Alternative C for the protection of wildlife?
- 62 | Applying special oil and gas lease stipulations to federal oil and gas may just shift the impacts to adjacent state or private lands. These impacts might be worse than without special lease stipulations and at an added cost to industry.
- 180 | Will BLM lease small tracts of federal oil and gas if the No Surface Occupancy restrictions include the entire tract?
- 181 | How much does drilling really affect wildlife? There are many instances where wildlife have not been affected or even benefitted from drilling.
- 182 | It appears that little restriction of off-road vehicles has been proposed. Doesn't off-road vehicle use impact wildlife in the same way oil and gas development can?
- 183 | Isn't it more effective for BLM to just sell isolated parcels rather than trying to manage them?
- 183 | Why should BLM try to exchange scattered lands rather than just disposing of them?
- 184 | Can anyone other than U.S. citizens buy public lands?
- 185 | Why are some areas closed to oil and gas leasing in Alternative D but open to leasing with special stipulations under Alternative C?

- 164 | The map illustrating oil and gas lease stipulations shows entire townships as having stipulations? Does that mean that all federal oil and gas within that township will be leased with special stipulations?
- 186 | Will special lease stipulations be applied to federal minerals located under private surface?
- 187 | How will private minerals located under BLM surface be handled?
- 188 | What percent of our scattered public lands fall within Coal Study Areas or within special oil and gas lease stipulation areas?
- 189 | Can the RMP be changed at a later date? Who initiates an amendment? Can the public require an amendment?
- 190 | Map K-1, portraying oil and gas lease stipulation areas, is unclear. How can you tell which areas have special stipulations under current management and which areas will be added under the preferred alternative?
- 191 | Does the plan consider lands and minerals located within the Little Missouri National Grasslands?
- 192 | Does the plan recognize county master plans and zoning plans?
- 193 | How do the No Surface Occupancy stipulations affect buried pipelines?
- 194 | Have coal companies been cancelling lease agreements with landowners because BLM excluded areas from further consideration?
- 195 | If energy markets were to rebound, would the Williston area support any coal mining?
- 196 | The reference to Appendix N on page 15 is incorrect.

HAZEN PUBLIC MEETING – JANUARY 29, 1987

Restrictions placed on coal mining by the BLM result in unnecessary costs to the coal mining companies. Draglines are constantly being moved to avoid federal coal because of unnecessary restrictions on mining. Costs resulting from this are damaging the North Dakota coal industry and are resulting in layoffs of mine employees.

The present federal coal royalty rate of 12.5 percent is excessive. There is no way for North Dakota lignite to compete with other states' coal paying such a high royalty. The excessive royalty rate makes federal coal so undesirable that companies will bypass it. Bypass results in increased costs and is indirectly putting persons out of work.

- 197 | Water wells and springs emanating from lignite represent important resources to the landowners in the area and are closely related to property values. There needs to be some form of mitigation required which protects the wells and springs of landowners located near mines. BLM should put stipulations on leases to ensure protection of off-site waters.
 - 198 | What are the reasons for the wildlife threshold tradeoffs in the Washburn Coal Study Area? Is there some way BLM can establish a scenic vista threshold for the Knife River Indian Villages Historic Site?
 - 97 | There should be oil and gas leasing stipulations for the protection of the seen area around the Knife River Indian Villages Historic Site.
 - 129 | The boundary of the Knife River Indian Villages Historic Site is not portrayed on the coal maps.
 - 199 | The document makes the replacement of mine spoil as an aquifer sound too good. Disturbance of the lignite aquifer will have widespread adverse impacts on water quality and quantity, water available for plant use, etc.
 - 183 | The BLM should not sell public lands outright.
- More air quality monitoring around Great Plains Coal Gasification Plant and sour gas producing oil fields is necessary. The State Department of Health should perform unannounced spot checks on air quality.
- Independent air quality monitoring groups should be established (e.g., citizens groups).
- The State Department of Health should analyze the gasification plant emissions using gas chromatography.
- 200 | Coal companies should be required to mine all seams. Leaving part of the coal sacrifices long-term benefits for short-term gains.

BOWMAN PUBLIC MEETING – FEBRUARY 3, 1987

- 201 | Appraisals of public lands available for disposal are too high. There is no way to make farming or ranching pay with such high land costs.
- 202 | Is it possible for BLM to exchange public lands for private lands one-for-one?
- 201 | Appraisals use comparable sales from throughout the county but should only look at sales in the western portion of the county.

- 201| Appraisals should be based on the value of the land's production, not comparable sales.
- 201| BLM appraisers have not visited all of the tracts appraised. Accurate appraisals cannot be made without being on the ground.
- 202| Can BLM exchange public lands located within the Alternative C consolidation area?
- 203| BLM's initial attempts at exchange pooling in Bowman County were perceived as threats to landowners.
- 203| BLM's exchange proponent used high-pressure tactics to coerce landowners during the Rhame, North Dakota meeting.
- 201| How recent are the comparable sales BLM uses in their appraisals? How often are BLM appraisals updated?
- Consolidation of public lands in Bowman County is a good idea. There should continue to be public lands available for multiple uses in Bowman County.
- 204| Recreationists should be required to stay on existing roads and trails to avoid soil and vegetation loss.
- 204| During wet periods, travel should be restricted to main roads.
- Recreational use of scattered tracts does result in indirect impacts to surrounding landowners.
- 205| How will BLM regulate recreation use? Will BLM build facilities such as campgrounds?
- 206| What does BLM mean by the term "endangered species?"
- 207| Sage grouse are scarce in North Dakota and should receive special attention in BLM's management.
- 208| Landowners should be given the first opportunity to purchase public lands within their farm or ranch boundaries.

RESPONSE TO PUBLIC COMMENTS

The following are responses to each identified comment or question. Each response has been numbered to correspond with the numbered comments.

Responses are in the form of: (1) explanations or clarifications, (2) changes made to portions of the draft that have been reprinted in this document, and (3) changes to be made to portions of the draft that have not been reprinted. All significant changes made to reprinted portions are indicated by bold type within the body of this document. All changes to be made to the portions of the draft not reprinted are listed under the section titled "Errata and Changes to Text" immediately following this section of the document.

- 1 Regulations guiding the general development of this plan and EIS are cited throughout Chapter One, 43 CFR 1600, 43 CFR 3420, 43 CFR 3460, and 40 CFR 1500. Also, citations for more specific management actions or analyses are made throughout the document.
- 2 Issue-specific objectives, resource allocations, and management actions are presented in Table 2-1 of this document. Objectives, allocations and specific actions (where known) for non-issue resources and programs are outlined under Management Guidance Common to All Alternatives, Chapter Two. Changes have been made to Management Guidance Common to All Resources to clarify the resource or program objectives.

The four alternatives analyzed in detail were selected because: (1) they addressed the four planning issues, (2) they met or partially met the planning criteria, (3) they presented a reasonable range required by NEPA, (4) they met the requirements of FLPMA and regulatory multiple-use mandate, (5) they met the resource-specific legal, regulatory, and policy requirements, and (6) they included land use allocations and management actions implementable by the BLM.

In several instances the range of actions specific to any one resource was limited by legal and regulatory requirements. This was especially true in the case of coal. The coal planning process (43 CFR 3420.1-4) allows flexibility only in the assessment of multiple-use tradeoffs. The alternatives presented in the plan provide a range of multiple-use tradeoffs by assessing varying degrees of protection for steep slopes, wildlife habitats, buried-valley aquifers, utility systems, etc. Multiple-use tradeoffs which do not vary by alternative are limited by the planning criteria or the inflexible nature of the required protection (e.g., MINUTEMAN missile silos).
- 3 See pages 68, 125, 145, 153 and 154 of the draft RMP for wetlands and pages 125, 146, 153 and 154 of the draft RMP for riparian habitats. Also see Chapter Two, Management Guidance Common to All Alternatives, Wildlife Habitat Management, and Appendix B, this document.
- 4 See Appendix H, page 132, of the draft RMP for a discussion on mitigating loss of woody draws. As a multiple-use agency, BLM is not required to exclude every woody draw from the CSAs. Any woody draw not screened out at this time and encountered during activity planning will be closely scrutinized.
- 5 Buried-valley aquifers are protected under both Alternatives C and D. In Alternative C buried-valley aquifers will be evaluated during site-specific analyses and again during mine permit and plan review for protection or development on a site-by-site basis. In Alternative D these aquifers have been dropped from further consideration.
- 6 See changes made to Appendix B, Multiple-Use Tradeoffs, this document. Isolated spots with slopes greater than 30 percent may not be included in areas dropped from further consideration. The Dickinson BLM planning staff feels that areas excluded from further consideration because of the 30 percent slope tradeoff are being effectively protected. Using a 20 percent slope cutoff figure would include too much area of lesser slopes and areas between 20 and 30 percent that can be effectively mined and reclaimed. Industry and PSC comments during the Southwest and McKenzie Williams MFPs indicated that 30 percent would be a more realistic cutoff than 20 percent based on past experience. Areas with slopes between 20 and 30 percent will be closely analyzed on a case-by-case basis during activity planning to determine suitability for mining and reclamation.
- 7 See changes made to Appendix B, Multiple-Use Tradeoffs, this document.
- 8 See "Errata and Changes to Text," Chapter Four, Introduction, page 55.

See revisions to Identification of Areas with Coal Development Potential, Appendix B to this document.
- 9 Appendix H, Soil and Reclamation Potential, has been revised. See "Errata and Changes to Text," Appendix H, page 129-130.

Appendix B, Application of Coal Screens, of this document presents the specific factors involved in the application of the four coal screens in this RMP. Also see Chapter Two, Management Guidance Common To All Alternatives, Minerals, of this document and Chapter Two, Alternative A, Coal Leasing, of this document for discussion of Alternative A. Some of the differences in coal

screen criteria appear throughout the discussion for Alternative A, Chapter Four of the draft. Also see changes made to Chapter One, Purpose and Need, this document. Differences in coal screen criteria over recent years appear in the document Federal Coal Management (USDI 1985) and are discussed in the Final Supplement to the Federal Coal Management Program EIS (USDI 1985).

10 See changes made to Chapter Two, Designation of Areas of Critical Environmental Concern, this document.

11 Management guidance common to all alternatives, which includes decisions from past planning and environmental documents and policy regarding non-issue resources or programs, is presented in its entirety in Chapter Two. Maintenance and Operation management actions include those actions necessary to complete, maintain, or operate existing management commitments. Maintenance and Operations is a policy statement for BLM in Montana and the Dakotas which is used primarily for annual budget development; bringing into focus those actions or activities which require a minimum amount of management attention each year. Maintenance and Operations includes items such as completion of ongoing land use plans, response to outside inquiries or applications, and maintenance of existing facilities. The detailed Maintenance and Operations policy statement for BLM in Montana and the Dakotas is available for public review at either the Dickinson District Office or Montana State Office.

12 PSD increments and AAQS are two distinct requirements of the Clean Air Act and are not comparable numbers.

13 Coal mine dust does not exceed the 250 tons/year requirement to be a PSD source so a PSD review is not necessary. However, the mine still consumes increment which could have been available to other sources and therefore, any associated PSD source (coal conversion facilities like electric generation facilities) could not contribute significantly to the PSD increment. With the consumption of increment by a non-PSD source (coal mine), an associated PSD source (coal conversion facility emitting 375 lbs/hour or 1300.5 tons/year) would most likely contribute significantly to the PSD increment.

Local sampling of coal mines occurred across the United States during the development of the PSD and AAQS of the Clean Air Act and they continue as permit conditions dictate. The results of continued sampling may be obtained from the NDSDH. The BLM is not proposing any local sampling. It is not within our administrative jurisdiction but that of the NDSDH.

14 In our analysis we assumed the emissions from the generic facilities had received treatment by

the best available control technology currently available to treat gas streams.

The measurement of 375 lbs/hour is a rate of flow and can only be expressed as a concentration for a given volume.

15 Chapter Two, Air Quality, this document.

16 Potential impacts to air quality cannot be properly assessed until site-specific proposals are made. Thus, it would not be appropriate to exclude lands from further consideration for the leasing or exchange of coal at this time under the multiple-use tradeoff screen. See Chapter Two, Air Quality, this document.

17 The City of Dickinson's municipal watershed does not meet the requirements for protection under criterion 17 (i.e., not committed by a federal surface management agency). Thus, it was protected under the multiple-use tradeoff coal screen.

18 See Hydrology, page 130 of the draft RMP for a discussion of surface coal mining impacts to the ground water system. Site-specific impacts will be addressed during coal mine activity planning or response to applications.

19 Buried-valley aquifers were addressed in Alternative C. See Hydrology, page 76 of the draft RMP.

See Hydrology, page 130 of the draft RMP for a discussion of surface coal mining impacts to the ground water system. Site-specific impacts will be addressed at coal mine activity planning.

20 As this is a general land use plan, the reclamation section under Topography and Soils in Chapter Three of the draft RMP provides an overview of soils and their reclaimability. This was indicated by the discussion of LCCs and the broad generalizations that can be made from them. Though a drastic form, surface mining is a type of mechanical land treatment. Normally the favorable chemical and physical properties (medium texture, low sodium and salinity, neutral to slightly alkaline pH, etc.) that put soil in a high LCC (II, III) will make that soil well suited for agriculture and reclamation. Generally soils in the lower LCCs (VII, VIII) pose greater problems to agriculture and likewise to reclamation.

21 Mining and reclamation of sodic soil areas allows soils such as Rhoades to be removed and replaced with suitable plant growth material of better quality and higher productivity than was originally there.

22 We feel the 1/2 inch = 1 mile scale of the County General Soil Survey Reports is adequate for the broad planning concept of the RMP. If and when

any specific proposals are identified for activity planning or lease-by-application, detailed county soil surveys at a scale of 1:20,000 or 1:24,000 will be used. See Appendix A to this document.

23 Chapter Three, Topography and Soils, has been revised. See "Errata and Changes to Text," Chapter Three, page 34.

24 See Appendix H, page 130, of the draft RMP. SMCRA dates from 1977. Bond release has not occurred on lands under this law because of the ten year performance period. The next ten years (1987-1997) should see some reclaimed lands come up for bond release. We feel our discussion of re-establishment of woody plants and native prairies and proposed mitigation measures has indicated our concern. Also see Appendix B, Multiple-Use Tradeoffs, Wildlife Threshold, this document.

25 North Dakota PSC, Reclamation of Surface-Mined Land Regulations: 69-05.2-22-02 and -03 Performance Standards allows for the substitution of introduced species for native if approved by the Commission. The approved native grassland seed mixture must include species that will provide a diverse, effective, and permanent vegetative cover with seasonal variety, succession, and regenerative capabilities native to the area.

26 See changes made in Appendix B of this document.

The identification of significant areas of surface owner opposition did involve a degree of subjectivity. The assessment of opposition required a complex application of some or all of the eight decision factors presented in Appendix B of this document. The factors were applied in the order presented, giving greatest weight to the number of surface owners involved and acreage included under the "opposed" responses. Size, location, and number of existing leases were reviewed only in instances where application of the higher weighted factors was inconclusive.

To reduce both the real and perceived subjectivity involved in our assessment of surface owner opposition, three open houses were held to discuss the consultation process with landowners with whom we consulted. Two coordination meetings were also held (July 19, 1985 and April 3, 1986) between representatives and affiliates of the Dakota Resource Council and BLM staff responsible for identifying areas of significant opposition. The purpose of these two meetings was to discuss, specifically, the application of the eight decision factors.

27 BLM must follow the surface owner consultation regulations as stated in 43 CFR 3420.1-4 and Section 714 of SMCRA.

28 See Appendix B to this document.

29 Appendix I, Economic and Social Conditions, has been revised. See "Errata and Changes To Text," Appendix I, page 137.

30 Severance tax is paid in lieu of property tax on the minerals. Local mine property taxes would still be paid (Office of State Tax Commission, pers. comm.). The dispersion of coal severance taxes is explained in detail on page 51 of the draft.

Appendix I, Economic and Social Conditions, has been revised. See "Errata and Changes To Text," Appendix I, page 137.

31 Appendix I has been revised. See "Errata and Changes to Text," Appendix I, page 140.

32 See changes made to Appendix B, Lands Found Unsuitable and Land Acceptable With Stipulations, this document.

33 We acknowledge that more maps depicting resources would be helpful to the reader. However, budget constraints and the presentation of a manageably-sized document are a problem. We have tried to use the maps to depict the bottom line of our alternatives. Interested parties should visit our office to view maps or contact the Dickinson District Office for more detailed information.

34 See Appendix C to this document.

Lease stipulations are proposed for the development of federal minerals underlying federal, state and private surface. The stipulations represent mitigation measures necessary to avoid or minimize adverse effects. The responsibility and authority for the development and use of these mitigation measures are established by NEPA and FLPMA, and corresponding regulations.

Regulations implementing NEPA require Federal Agencies to "Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment (40 CFR 1500.2(e))." Environmental impact statements are required to include appropriate mitigation measures within the alternatives considered (40 CFR 1502.14(f)) or to identify means to mitigate adverse environmental impacts during the analysis of alternatives (40 CFR 15002.16(h)).

The Congressional declaration of policy for FLPMA states: "the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values..." (43 U.S.C. 1701.(a)(8)).

The definition of “public lands” in FLPMA includes any land or *interest in land* owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management.

FLPMA also mandates the development of land use plans that use and observe the principles of multiple use and sustained yield provided in the act including: “the use of some land for less than all of the resources,” “a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations . . .,” “the achievement and maintenance of . . . regular periodic output of the various renewable resources . . .,” and “harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment . . .” Mitigation measures are, in some cases, necessary to achieve multiple use and sustained yield; especially in providing for use of one resource without incurring long-term or permanent losses of other resources. Mitigation measures have been presented in the plan as reasonable opportunities for providing the combination of uses that best meets the needs of the American public.

Oil and gas lease stipulations represent mitigation measures that have been developed for the protection of the human environment and to avoid long-term or permanent impairment of other resource uses. The authority to consider such impacts during land use planning is also stated in 43 CFR 1601.0-8: “. . . the impact on local economies and uses of adjacent or nearby non-federal lands and on non-public land surface over federally-owned mineral interests shall be considered.”

In all cases, the stipulations prescribed for federal mineral development in split estate situations apply only to the development of the federal minerals. These stipulations do not dictate surface management. The mitigation measures present no restrictions on surface activities conducted for purposes other than those mineral development activities which are permitted, licensed, or otherwise approved by the Bureau of Land Management.

35 Appendix J has been revised. See “Errata and Changes to Text,” Appendix J, page 141.

See changes made to Chapter Two, Lands and Realty, this document.

The leasing of oil and gas is a discretionary action. A planning decision of no leasing in a specific area is for the life of this plan and does not constitute an irretrievable commitment of resources. A withdrawal typically has a longer life than this plan. Changing a planning decision is readily accommodated by an amendment or revision while a withdrawal revocation is more cumbersome.

36 See changes made to Appendix C, Special Lease Stipulations, this document.

37 Screening analysis such as review of gas analysis and flow rates and modeling analysis following EPA and State guidelines will normally be performed during field development environmental analyses. The BLM is presently exploring opportunities for an interagency effort to study air quality and possible management actions in the Williston Basin.

38 Chapter Three, Air Quality, has been revised. See “Errata and Changes to Text,” Chapter Three, p. 29.

39 Chapter Three, Table 3-1, has been revised. See “Errata and Changes to Text,” Chapter Three, Table 3-1.

40 Chapter Three, Table 3-2, has been revised. See “Errata and Changes to Text,” Chapter Three, Table 3-2.

41 Chapter Three, Air Quality, has been revised. See “Errata and Changes to Text,” Chapter Three, page 31.

42 Chapter Three, Air Quality, has been revised. See “Errata and Changes to Text,” Chapter Three, p. 32.

43 Chapter Three, Table 3-3, has been revised. See “Errata and Changes to Text,” Chapter Three, Table 3-3.

44 Chapter Three, Air Quality, has been revised. See “Errata and Changes to Text,” Chapter Three, p. 32.

45 Chapter Three, Air Quality, has been revised. See “Errata and Changes to Text,” Chapter Three, p. 32. We believe that the assumptions used in the air quality study were appropriate. Based on those assumptions, AAQS’s would be exceeded and PSD Class II increment would be consumed.

46 Chapter Three, Air Quality, has been revised. See “Errata and Changes to Text,” Chapter Three, p. 31.

47 See page 103 of Draft Ft. Union Draft EIS Air Quality Supplement.

48 A site-specific analysis as performed for the coal tracts in the Round I Fort Union Regional Coal Sale will be conducted during activity planning or in response to lease applications. See Appendix A to this document.

49 Appendix H has been revised. See “Errata and Changes to Text,” Appendix H, p. 129.

- 50** Appendix H, Air Quality, has been revised. See "Errata and Changes to Text," Appendix H, p. 129.
- 51** See changes made to Chapter Two, Table 2-2, this document.
- 52** See Land Pattern Adjustment, page 4, of the draft RMP.
See Chapter Two, Wildlife Habitat Management, this document.
See changes made to Chapter Two, Land Pattern Adjustment, this document.
See Chapter Two, Land Pattern Adjustment, this document. The BIA will be contacted early in the disposal process for tracts adjacent to reservation boundaries.
- 53** Appendix H, Cultural Resources, has been revised. See "Errata and Changes to Text," Appendix H, page 132.
- 54** Federal coal in the N½ of Section 8, T144N, R93W, was excluded in the draft RMP because of conflict with existing oil and gas development (Saxon Field). Additional review of oil and gas production records has shown that the Saxon and Halliday Fields in the Dunn Center CSA do not meet the definition for exclusion as found in Appendix B. Several comments, both public and in-house, noted the number of wells in these two fields (Halliday-1, Saxon-2), and their longevity (Halliday-about five more years, Saxon-about three more years). Although production is quite high (Halliday well-22,269 barrels of oil in 1986; Saxon wells-8,473 and 11,985 barrels of oil in 1986) the rather short expected life and low number of wells should make it possible for mineral developers to resolve any conflicts of interest between coal and oil and gas. For these reasons, we feel the Halliday and Saxon Fields do not have the significance of other fields excluded and should be added back into the area acceptable.
The acres of federal coal previously excluded have been added back into those acceptable and the coal tonnages adjusted accordingly. Acreages and tonnages are presented in Appendix B to this document.
- 55** Acreages have been adjusted under surface owner consultation, Appendix B to this document.
We have reviewed the original results of surface owner consultation and have made some modifications to the boundaries of the area of significant opposition in Sections 10 and 15 of T.144N, R.94W. The N½ of Section 15 and the NW¼ and S½ of Section 10 have been added to the area acceptable for further consideration for coal leasing or exchange. Portions of the N½ of Section 15, however, are only acceptable for further consideration with vegetation reclamation or protection stipulations.
- The rationale behind this adjustment is: 1) the adjusted area remains consistent with the significant opposition decision factors, (Appendix B of this document), 2) the NW¼ and S½ of Section 10 are presently held under surface lease agreements and, therefore, the landowners cannot be considered as opposed to mining under 43 CFR 3420.1-4 (e)(4)(ii), and 3) the lands in the N½ of Section 15 are, at the writing of this document, not held under a surface lease agreement for coal mining and, therefore, the landowner(s) has (have) the right to deny or provide consent for leasing. Adding these areas to lands acceptable for further consideration is consistent with the surface owner protection provided by Section 714 of SMCRA.
- 56** See Chapter One, The Planning Process — Coal Planning, this document.
While coordination between agencies is necessary, this RMP-EIS and the Bureau of Reclamation EIS deal with separate aspects of coal development in the Dunn Center area.
- 57** Nokota's interest in portions of the Dunn Center Study area was recognized throughout the multiple-use tradeoff analysis. Information presented in the Bureau of Reclamation EIS, coal data provided by Nokota (and predecessors), and Nokota's development plans have been used in developing the RMP/EIS.
- 58** For the purpose of a land use plan it is desirable to keep study criteria reasonably broad so as not to limit future options. We recognize that a depth of 120-150 feet is the general economic limit for North Dakota coal mining at this time. However, certain local geological conditions or a different economic outlook could change this depth limit. When specific tracts are identified for leasing, a more detailed site-specific analysis can be carried out.
- 59** See Chapter One, The Planning Process — Coal Planning, this document.
Coal Study Area boundaries were determined by the existence of coal with development potential as defined in Appendix B to this document. Tract delineation and more detailed study will occur during activity planning or in response to coal lease applications (Appendix A to this document). Industry interest in specific areas will be a criterion for tract delineation.
- 60** Specific barriers to mining will be identified and considered during activity planning or analysis of specific lease applications. Federal coal underlying major highways, railroads, pipelines, transmission lines, etc. was excluded under the multiple-use screen (Appendix B to this document). Maps providing greater detail are available for review in the Dickinson District Office.

- 61** Federal coal lying within the boundaries of the eligible Lynch Knife River Flint Quarry district was excluded from further consideration for the purpose of preventing impacts to a locally, regionally, and nationally significant cultural resource. The area was excluded under the authority of 43 CFR 3420.1-4(e)(3). This portion of the regulations reads:
- “Multiple land use decisions shall be made which may eliminate additional coal deposits from further consideration for leasing to protect other resource values of a locally important or unique nature not included in the unsuitability criteria . . .”
- Although coal unsuitability criterion 7 involves cultural resources, it is limited to “. . . places which are listed on the National Register of Historic Places . . .” The Lynch Knife River Flint Quarries, therefore, are not included under the unsuitability criterion.
- The consideration of cultural resources eligible for the NRHP was recommended in the proposed action of the Final EIS Supplement for the Federal Coal Management Program (USDI 1985, p. 82). This document also stated that Planning Criteria would be the basis for multiple-use trade-offs. Exclusion of areas containing regionally or nationally significant cultural resources was a planning criterion for the North Dakota RMP. The Planning Criteria were made available for public review in July, 1985.
- The protection of a locally, regionally, and nationally significant resource such as the Lynch Knife River Flint Quarries is also consistent with the mandates of NEPA and FLPMA. See response Number 148.
- 62** This is a possibility. However, as stated in Appendix C to this document, there will be opportunities to adjust proposed stipulations to accommodate exceptional circumstances.
- 63** Changes to criterion 7 have complicated management decisions made in previous plans. Criterion 7 now states that sites which are listed on the National Register may be excluded from further consideration for coal leasing. However, eligible sites previously included under criterion 7 prior to 1983 are provided no such protection. The cultural resource values which were identified in previous plans are still valid and we have assumed for the purposes of analysis that the resources would be protected through application of the multiple-use tradeoff screen.
- 64** The BLM used the Class I cultural resource overview of the Dickinson District as a baseline to formulate cultural resource decisions in the RMP. Additional data which will be provided by the ongoing Class II inventory and other investigations conducted since the Class I inventory will be used during the activity planning or lease by application stage. Planning at these stages is fine-grained, requiring consultation with the SHPO and Advisory Council to ensure sensitive and appropriate consideration of cultural resources prior to issuance of a lease. Additional survey/evaluation may be necessary as part of this planning stage.
- 65** See Chapter One, Land Pattern Adjustment, this document.
- See Chapter Two, Wildlife Habitat Management, this document.
- See changes made to Chapter Two, Alternative C, Land Pattern Adjustment, of this document.
- See Appendix D to this document.
- As a part of mitigation for wetland losses due to the Garrison Diversion project, USFWS evaluated BLM surface tracts in the prairie pothole region. Only three tracts were found to have values commensurate with that mitigation.
- 66** The reference to state lands was inadvertently omitted. A correction has been made to Chapter One of this document.
- 67** See changes made to Literature Cited (USDI 1985), this document.
- 68** Chapter Three, Topography and Soils, has been revised. See “Errata and Changes To Text,” Chapter Three, page 34.
- 69** Chapter Three, Topography and Soils, has been revised. See “Errata and Changes to Text,” Chapter Three, page 35 and Table 3-6.
- 70** Appendix I, Cultural Resources, has been revised. See “Errata and Changes to Text,” Appendix I, page 135.
- See changes made to Chapter Two, Management Guidance Common To All Alternatives, Cultural Resources, this document.
- 71** We have reviewed the records in reference to A.C. Townley’s homestead and find the data insufficient to remove that location from further consideration for coal leasing. We have, however, verified that A.C. Townley farmed the location for two years between 1904 and 1906. We will continue to investigate, and if sufficient data is generated that unequivocally establishes the significance of the site, the area will be excluded from further consideration for coal leasing.
- Chapter 4, Cultural Resource Management, has been revised. See “Errata and Changes to Text,” Chapter Four: page 71, paragraph 3; page 80, paragraph 8; page 90, paragraph 1.
- 72** Chapter Three, Threatened and Endangered Plant Species, has been revised. See “Errata and Changes to Text,” Chapter Three, page 43.

- 73** Chapter Three, Federally Listed Threatened and Endangered Species, has been revised. See "Errata and Changes to Text," Chapter Three, page 44.
- 74** See changes made to Chapter Two, Management Guidance Common To All Alternatives Wildlife Habitat Management, this document.
- 75** The Golden Eagle Special Review Area under Alternative A provides for a "notice" to the lessee. This is not technically the same as a lease stipulation.
- Montana BLM standard stipulations have not been revised to expand the "notice" to include ferruginous hawks and prairie falcons.
- 76** Alternative D was structured to provide protection of amenity resources. Under this alternative up to 99,497 acres could have no leasing. Less restrictive stipulations are found in Alternative A, B, and C.
- 77** A complete discussion and description of oil and gas operations and procedures (including leasing, exploration, drilling, development, production, reclamation, royalty reporting, etc.) is available to the public in 43 CFR 3100 through 3180, Onshore Operating Order number 1, Notice to Lessees 1, 2b, 3a, 4a, 7, NTL-MSO-1-84, NTL-MSO-1-85, BLM Manual Parts 3000-3180, 25 CFR, the National Environmental Policy Act, the Federal Land Policy Management Act, Federal Oil and Gas Royalty Management Act, and the Oil and Gas Environmental Assessment.
- 78** Time and monetary constraints prevented publication of detailed oil and gas stipulation maps for each alternative. Shading of a township in Map K-1 indicates that there are some federal minerals in that township and that one or more stipulations might apply to those tracts. The possible acreages affected by each stipulation are detailed in Appendix C, Special Lease Stipulations, of this document. A more detailed map of stipulation areas under the preferred alternative will be available in the RMP desk document after the plan is finalized.
- 79** Although most scattered tracts have a potential for being used by recreationists, there is little evidence that it is happening. Problems obstructing recreational use include: (1) lack of legal and/or physical access, (2) small tract sizes, and (3) difficulty in locating tracts. One of the foremost benefits of land exchanges is the provision of readily identifiable, easily accessible blocks of public land for recreational activities.
- 80** The decision made in *Connor v. Burford* is presently under appeal to the 9th Circuit Court of Appeals. Recently, the 10th Circuit Court of Appeals rendered a decision on a similar case that could be interpreted as contrary to the *Connor v. Burford* decision. Therefore, the BLM will not fully implement the *Connor v. Burford* decision until the 9th Circuit Court has rendered a decision.
- However, we are pursuing a course of action in the North Dakota RMP that, in our opinion, substantially complies with the *Connor v. Burford* ruling. To accomplish this, we are identifying areas open and closed to oil and gas leasing and the restrictions (stipulations) to be applied to oil and gas leasing. We are basing this decision on professional geologist, petroleum engineering, and other natural resource specialist projections of development trends and their associated impacts, and we are analyzing and documenting these planning decisions in an EIS.
- These actions are in accord with the Bureau's oil and gas leasing special program guidance and MSO lease stipulation policies.
- 81** See Chapter Two, Tables 2-1 and 2-2, this document.
- 82** Chapter Three, Ground Water, has been revised. See "Errata and Changes to Text," Chapter Three, page 39.
- 83** These were not addressed because more study will have to be conducted to determine the exact locations of glacial outwash deposits in the CSAs. This will be done at the mine activity planning stage or in response to specific lease applications.
- 84** Separation of glacial drift aquifers into surface and buried is not easily done due to the complexity of glacial deposits. Thus, for clarity, glacial drift aquifers were classified according to the dominant aquifers which are the buried-valley aquifers.
- 85** Chapter Three, Ground Water, has been revised. See "Errata and Changes to Text," Chapter Three, page 42.
- 86** Some buried-valley aquifers contain broken, unconsolidated coal seams. Shallow buried-valley aquifers may have a coal seam that has development potential below the aquifer. These aquifers are protected to prevent them from being negatively impacted or destroyed through mining the coal seam beneath the aquifer and from mining through the aquifer to get to adjacent coal seams.
- 87** Appendix H, Generic Mine Scenario, has been revised. See "Errata and Changes to Text," Appendix H, page 130.
- 88** Permeability in this case refers to intrinsic permeability which pertains to the relative ease in

which a porous medium can transmit liquid. This term is *independent* of the density or kinematic viscosity of the liquid. Whereas, hydraulic conductivity is a coefficient relating the rate in which liquid moves through the porous medium. Hydraulic conductivity is *dependent* on the density and kinematic viscosity of the liquid. Therefore, the two are technically different terms.

89 See changes made to Appendix C, Special Lease Stipulations, this document. A more detailed map of stipulations under the preferred alternative will be available in the RMP desk document after the plan is finalized.

90 See changes made to Appendix C, Special Lease Stipulations, this document.

91 Prior to the development of the RMP all public land was open to motorized ORV use. Through scoping, we identified specific problem areas and structured alternatives accordingly. At this time, ORV impacts to public land are most severe during wet periods (March 1 — June 1). For the remainder of the year, impacts from ORV use are slight. Alternative C, our proposed alternative, balances impacts to the environment with current public demand for access to public land to hunt, fish, and hike and for off-road vehicle recreation.

92 See changes made to Appendix C, Oil and Gas Lease Stipulations, this document.

93 We have given, and will continue to give, priority to the designation and protection of areas of critical environmental concern as required in FLPMA. According to FLPMA (Sec. 103(a)):

“The term ‘areas of critical environmental concern’ means areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.”

We believe that if the resource does not exhibit a high risk of being lost in the short term, there are other management opportunities for that resource.

94 See changes made to Chapter Two, Management Guidance Common to All Alternatives, Recreation and Visual Resources, this document.

95 Unsuitability criterion 10 does not apply within North Dakota.

See changes made to Chapter Two, Management Guidance Common To All Alternatives, Wildlife Habitat Management, this document.

See changes made to Appendix C, Special Lease Stipulations, and Appendix D, General Program Guidance and Site-Specific Evaluation Criteria, this document.

96 Currently proposed restrictions are designed to protect the resources on the three tracts proposed for ACEC designation.

97 There are no federal oil and gas resources within a 3.5 mile radius of the Knife River Indian Villages National Historic Site. In cooperation with Theodore Roosevelt National Park a 3.5 mile radius was determined as the minimum distance needed to protect the viewshed of National Park Service Units.

98 Appendix L, Application for Permit to Drill Approval, has been revised. See “Errata and Changes to Text,” Appendix L, page 147.

99 If sufficient agency or public interest is expressed for ORV trails, we will consider the feasibility of trail development on public land. See changes made to Chapter Two, Management Guidance Common To All Alternatives, Recreation and Visual Resources, this document.

100 See changes made to Chapter Two, Alternatives C and D, Off-road Vehicle Use Designation, this document.

101 See changes made to Chapter Two, Land Pattern Adjustment, this document.

102 See Chapter Two, Areas of Critical Environmental Concern, this document.

See changes made to Appendix D, Table D-1, this document.

103 See changes made to Chapter Two, Air Quality, this document. It is not feasible to consider changes to the BLM RMP due to possible redesignation of PSD standards or any tribal air quality regulations when such regulation changes are unknown.

104 Chapter Three, Economic and Social Conditions, Social Well-Being, has been revised. See “Errata and Changes To Text,” Chapter Three, page 52.

105 This shading pattern resulted because the lowest map resolution depicted for Alternatives B, C, and D was one township. However, under Alternative A, the township in question was divided in two. Thus, Map K-1 has a different shading pattern in each half of that township.

We believe it is most efficient to identify possible resource protection needs as early as possible in the leasing process.

106 See changes made to Chapter Two, Alternative C, Oil and Gas Leasing, this document.

107 The following are the definitions of "multiple use" and "sustained yield" as established in 43 USC 1702 (c) and (h) (1982 ed.):

The term "multiple use" means the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output.

The term "sustained yield" means the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use.

The BLM is required to prepare land use plans that use and observe the principles of multiple use and sustained yield, consider present and potential uses of public lands, and consider the relative scarcity of the values involved and the availability of alternative means and sites for realization of those values (43 U.S.C. 1712 (c)).

The proposed management plan (Alternative C) was developed for the purpose of achieving a combination of allowable resource uses that will best meet the present and future needs of the American public. In doing so we have made necessary tradeoffs in cases where some unrestricted uses would cause long-term or permanent losses of key resource values. In most instances conflicts were resolved through enhanced management or the use of partial restrictions such as development stipulations. The proposed alternative involves restrictions or partial exclusion of some resource uses only when, in our estimation, unrestricted use would have the net effect of a reduction in total public benefits.

In addition to complying with the mandates of multiple use and sustained yield, the plan and

EIS must fulfill the requirements of other legislation and regulations such as NEPA and SMCRA. Mitigation (e.g., avoidance of certain areas or protective stipulations) has been included as part of the alternatives (40 CFR 1502.14).

In the case of coal, certain areas have been excluded from further consideration for leasing or exchange through the application of the unsuitability criteria, multiple use tradeoffs, and surface owner consultation (43 CFR 3420.1-4). Also, additional areas of federal coal were found acceptable for further consideration with special stipulations (43 CFR 3420.1-4(a)). All decisions made during the application of the four coal screens were performed within the multiple use and sustained yield concepts of providing for those resource uses that, in combination, best meet the needs of the American people (both present and future), and provide regular periodic output of renewable resources.

All of the alternatives considered in the EIS are designed to meet the various legal and regulatory mandates for management of public lands (including federal minerals). The four alternatives were developed to provide a range of potential management plans to aid in the selection of the single plan which best responds to the planning issues. Each alternative presents a combination of land use allocations and specific management actions (including mitigation) that responds to public opinion, procedural requirements, and Department of the Interior and BLM objectives. Public opinion used to develop the alternatives was expressed during past Dickinson District planning and management efforts, during the identification of planning issues and criteria, and during related analyses such as the Office of Technology Assessment's review of the Federal Coal Program. Each of the four alternatives was analyzed through the EIS to determine which alternative, or parts of the alternatives, best met the mandate of multiple use and sustained yield while complying with all other legal and regulatory requirements.

108 Management prescriptions are presented in Chapter Two of the draft. Some changes and clarifications have been included in Chapter Two of this document.

109 See Chapter Two, Management Guidance Common To All Alternatives, Wildlife Habitat Management, this document. Grazing management will be adjusted, if necessary, to properly manage riparian habitats.

110 The "List of Preparers" presented in Chapter Five of the draft and this document provides descriptions of qualifications for those persons having primary responsibility for the preparation of the identified portions of the RMP and EIS. Other specialists located in both the Dickinson District Office and Montana State Office provided inventory data, reviews for technical adequacy, reviews for procedural and program com-

pliance, and participated in interdisciplinary discussions of required resource tradeoffs and necessary management actions. These specialists were included in the draft document "List of Preparers" under the headings of "Management Guidance," "Program Guidance and Review," and "Other Specialists." Chapter Five of this document contains a modified list of preparers.

See also response number 2.

- 111** We believe our wildlife and habitat data was fully adequate for the level of detail involved with the decisions proposed in the plan. See also response number 8.
- 112** The term "extensive recreation management area" refers only to management for dispersed types of recreation use (hunting, hiking, etc.) rather than intensive or developed uses such as campgrounds, picnic areas, or playgrounds. Extensive recreation management does not preclude other resource uses.
- 113** Management decisions excluding one or more of the major uses for two or more years with respect to a tract of land of 100,000 acres or more must be reported to Congress (43 U.S.C. 1712.(e)).
- 114** Specific management actions are presented throughout Chapter Two, Management Guidance Common To All Alternatives and Alternatives Considered in Detail, this document.
- 115** See changes to Appendix B, Lands Acceptable With Stipulations, this document.
- 116** See changes to Appendix B, Multiple-Use Tradeoffs, this document.
- 117** See changes to Appendix B, Identification of Areas with Coal Development Potential, this document.
- 118** The exclusion of areas with concentrations of slopes greater than 30 percent in Alternatives A and C and 15 percent in Alternative D was done as a *multiple-use tradeoff*. Page 16 of the draft RMP refers to "concentrations of slopes greater than 30 percent" being excluded from further consideration. As noted on page 111 of the draft RMP only *small* areas with slopes greater than 30 percent have been mined. Normally, areas with concentrations of slopes greater than 30 percent present problems with initial soil removal, erosion, recontouring, and stability during mining and reclamation. There often are other high value resources associated with steep slopes that conflict with mining (woodlands, creeks, shrubs, aesthetics). See also response number 6.
- 119** Most allotments are in the "C" category because: (1) management opportunities are

limited by the low percentage of federal range (1-25 percent) in the allotment, (2) range condition on 85 percent of lands leased for grazing is good to excellent, and (3) during the categorization process no serious use conflicts were identified. Although no allotment-wide management problems have been identified, there are still local areas that can benefit from specific habitat prescriptions.

- 120** See Chapter Two, Wildlife Habitat management, this document. Wildlife seasonal data is needed only for certain species in the Big Gumbo and Lost Bridge areas.
- See Chapter Two, Selection of the Proposed Alternative, Oil and Gas Leasing, this document. Populations of elk and bighorn sheep are expanding. If and when seasonal use areas are identified, the stipulations will be in place. This helps avoid future problems by informing lessees of possible limitations.
- 121** Analysis of the management situation is a required step in the BLM resource management planning process but is not presented within the published plan. The analysis of the management situation for the North Dakota RMP is a collection of background resource data and includes an assessment of resource uses and demands, and an assessment of management opportunities, and management constraints. The analysis of the management situation consists of numerous maps and overlays, automated data files, and a "shelf document" located in the Dickinson District Office library. The analysis of the management situation serves as the master data base for district management and is designed to accommodate frequent additions of data and corrections or modifications to data as the management situation changes.
- The draft and final plan and EIS are based on information considered in the analysis of the management situation.
- 122** See Wildlife, page 132, of the draft RMP. Improved habitat diversity is not certain but rather is conditional on the several factors mentioned. Even if increased habitat diversity is obtained, wildlife populations may not recover due to other factors listed on page 132.
- 123** See Wildlife, page 131, of the draft RMP. The stated conclusion does take this fact into account.
- 124** The economic benefits of coal development are discussed in more detail in Appendix B, Economic and Social Conditions, page 139 of the draft RMP.
- 125** [Error in comment reference. The page number is actually 132 of the draft RMP.] Poaching and harassment are known impacts of coal development (see references under Wildlife, page 132, of the draft RMP). Known impacts must be analyzed.

- 126** Cumulative effects of coal leasing and oil and gas leasing have been analyzed throughout Chapter Four of the draft wherever possible. In some instances, however, cumulative effects may not be accurately predicted until site-specific development plans and resource attributes can be considered. The plan attempts to minimize this uncertainty by prescribing necessary mitigation (stipulations, avoidance areas, alternative locations, etc.). We have modified the plan to reflect specific concerns regarding the effects on Theodore Roosevelt National Park (see responses to specific comments or requests).
- See changes made to Chapters Two, Alternatives C and D, Coal Leasing, Appendix B, Lands Acceptable with Stipulations, this document.
- 127** The four alternatives were formulated to present a range of options of future management. Alternative D is included to provide a full range of these options. The final plan selected may include any portions of the four alternatives considered.
- See Chapter Two, Alternative Formulation, this document.
- 128** Error noted. This was a printing error and does not affect the analysis. See "Errata and Changes to Text," Maps.
- 129** Although these areas are not depicted, they are explicitly referenced in the changes to Chapter Two, Management Guidance Common To All Alternatives, Recreation and Visual Resources, this document.
- 130** Chapter Four, Alternative D, Oil and Gas, has been revised. See "Errata and Changes To Text," Chapter Four, page 85.
- 131** See also response number 6. The actual number of acres over federal coal with slopes of 15 to 30 percent dropped from further consideration for leasing by other coal screens is variable due to overlap with areas to be excluded under wildlife threshold. However, the specific areas affected are depicted on overlays available for review at the Dickinson District Office.
- 132** Your concerns are noted and we welcome your comments on aquifer stipulations to be incorporated on any leases in the Dickinson and Elkhorn Coal Study Areas.
- 133** See changes made to Chapter Two, Alternatives, Alternative C, Coal Leasing, this document.
- See changes made to Appendix B, Application of Coal Screens, this document.
- Chapter Four, Environmental Consequences, has been revised. See "Errata and Changes to Text," Chapter Four, page 76 and 86.
- 134** Within CSAs, woody draws adjacent to parklands occur in the southwestern part of the Elkhorn CSA (Map 1 of the draft RMP). Part of this habitat is protected under the multiple-use trade-off screen and part under surface owner opposition. The remainder is within the wildlife threshold acreage for Elkhorn. These acreages would be subject to special review as outlined in Appendix B of this document.
- No wetlands adjacent to parklands have been identified within the CSAs.
- 135** See Appendix A, this document. Flexibility is built into the system.
- 136** See Appendix C, Special Lease Stipulations, this document. Stipulations are structured to cover all habitat. The acreages listed are the maximum possible if golden eagle and prairie falcon nest sites occurred in every conceivable location over federal minerals.
- 137** If a site has not been used at least once in the last seven years, it is probably not a particularly good site. We believe it is unreasonable to exclude surface occupancy from such sites.
- 138** See Chapter Two, Alternative C, Land Pattern Adjustment, this document.
- 139** There are no public lands that drain into NPS lands except for the Big Gumbo area over 70 miles south of Theodore Roosevelt National Park South Unit. Off-road Vehicle Use Designations under the proposed alternative (Chapter Two, Alternative C of this document) will minimize conceivable impacts to parkland resources.
- See also response number 91.
- 140** See changes made to Chapter Two, Management Guidance Common to All Alternatives, Recreation and Visual Resources, this document.
- 141** Appendix I, Visual Impacts, has been revised. See "Errata and Changes to Text," Appendix I, page 135.
- 142** See changes made to Chapter Two, Management Guidance Common to All Alternatives, Recreation and Visual Resources, this document.
- Chapter Four, Alternatives A, B, C, D, Recreation and Visual Resources, have been revised. See "Errata and Changes to Text," Chapter Four, pages 61, 70, 80, and 89.
- 143** Due to the pattern of federal coal within the Washburn CSA we have little control over coal development in this area. Additionally, if these areas were excluded from coal leasing a potential federal coal by-pass situation would be created. These areas have been designated, however, as

- special review areas requiring the consideration of stipulations which would protect existing visual resource values of National Park Service units. See Chapter Two, Management Guidance Common to All Alternatives, Recreation and Visual Resources, this document.
- 144** See changes to Chapter Two, Management Guidance Common to All Alternatives, Recreation and Visual Resources, this document.
- BLM actions which potentially affect the visual qualities of NPS units would be reviewed prior to approval of those actions. If mitigation would be required to protect the visual quality of NPS units the BLM in cooperation with NPS officials will develop appropriate protective stipulations.
- 145** Chapter Four, Alternative A, Cultural Resources, has been revised. See "Errata and Changes to Text," Chapter Four, page 61.
- 146** In general, past data recovery programs operating under existing laws and regulations have been effective in reducing the level of harm to cultural resources in North Dakota caused by a federal undertaking.
- 147** Chapter Four, Alternative A, Cultural Resources, has been revised. See "Errata and Change to Text," Chapter Four, page 62.
- 148** Chapter Four, Alternative C, Cultural Resources, has been revised. See "Errata and Changes to Text," Chapter Four, page 81.
- 149** Chapter Four, Alternative D, Cultural Resources, has been revised. See "Errata and Changes to Text," Chapter Four, page 90.
- See changes made to Chapter Two, Management Guidance Common To All Alternatives, Cultural Resources, this document.
- 150** Two North Dakota Century Codes (55-02-07 and 55-03-01) address paleontological resources. The first (55-02-07), refers to discoveries of paleontological resources on State land. The second, (55-03-01), specifies that any person conducting paleontological excavation in North Dakota must obtain a permit. The SHPO is responsible for the review and curation of paleontological records and reports.
- 151** See changes made to Chapter Two, Management Guidance Common To All Alternatives, Paleontological Resources, this document.
- 152** A detailed accounting of these items is beyond the purpose and scope of this document. However, stipulations are written to be feasible, implementable, and enforceable. Measures available to the authorized officer in the event of noncompliance are given in 43 CFR 3163.
- 153** Maximum stipulations for wildlife would be NSO on all federal surface and subsurface. This would not allow for multiple-use management.
- 154** We believe that the lease stipulations along with further possible restrictions at APD time will be sufficient to protect winter range and still allow some development.
- 155** Our current consultation processes with various agencies are satisfactory. Frequent contacts are made as needed. Memoranda of understanding or agreement will be developed if and when the present coordination processes prove unsatisfactory.
- 156** Development of water sources to reduce livestock distribution problems has been conducted within the three "M" category allotments. If livestock distribution problems are identified through monitoring, we will develop appropriate management practices to reduce or eliminate the conflicts. See Chapter Two, Management Guidance Common to All Alternatives, Range and Vegetation Management, Wildlife Habitat Management, and Water and Soil Management.
- 157** There are approximately 450 oil and gas fields within the Williston Basin. Baseline data for each of these fields are not presently available. The BLM has recently entered into a cooperative agreement with the Montana State Department of Health and Environmental Sciences and NDS DH to assess air quality as it relates to oil and gas production in the Williston Basin.
- 158** See changes made to Chapter Two, Wildlife Habitat Management, this document.
- Guidance is currently being developed by BLM for Montana and the Dakotas for management of plants that are rare but not listed by State or Federal Government as threatened or endangered.
- 159** There are too many riparian areas to be all included as "demonstration areas." "Demonstrations areas" have been, and will be, selected as appropriate.
- 160** See changes made to Appendix D, General Program Guidance, this document.
- 161** See Appendix C of this document. Procedures for oil and gas leasing and development are adequate to minimize impacts on these habitats.
- 162** The Green River watershed has little potential for use as a future municipal watershed in the foreseeable future. When the Southwest Water Pipeline Project is finished it will be the main source of the City of Dickinson's municipal water. The floodplain and alluvial valley floor of the Green River is protected through application of unsuitability criteria 16 and 19.

- 163** The proposed alternative makes all federal oil and gas reserves open to leasing. See Chapter Four, Alternative C, page 74, of the draft RMP.
- 164** No. See Appendix C, Special Lease Stipulations, this document.
- 165** No. Special stipulations relating to H₂S flaring are covered in Notice to Lessee (NTL) 4a.
- 166** See changes made to Chapter Two, Management Guidance Common to All Alternatives, Oil and Gas, this document.
- 167** See Appendix C, Special Lease Stipulations, this document.
- 168** During calendar year 1986, 14 isolated tracts of public land totalling 800 acres were exchanged for one consolidated tract of private land of 659 acres.
- 169** Important aquifers (buried-valley) are protected through stipulations in Alternative C and exclusion in Alternative D. See Chapter Four, Environmental Consequences, pages 57, 67, 76, and 86 of the draft.

See Hydrology, page 130 of the draft RMP for a discussion of surface coal mining impacts to the ground water system. Site-specific impacts will be addressed during coal mine activity planning or response to lease applications.
- 170** Federal coal cannot be leased without evidence of written consent to mining from the qualified surface owner.
- 171** The primary coal leasing options are regional lease offerings and leasing on application (including emergency leasing).
- 172** Most surface lease agreements are probably cancelled due to the slump in energy fuel markets and forecasts of continued slow energy markets.
- 173** Industry trends have proven to be nearly impossible to project in the absence of reliable forecasts of the price of oil. If oil prices increase significantly there will certainly be some corresponding increase in drilling and production activity.
- 174** The BLM State Director for Montana and the Dakotas makes the decision.
- 175** Yes.
- 176** Yes.
- 177** Documents superceded by this plan are identified in Chapter One, Purpose and Need. Other documents used in preparing the RMP and EIS are referenced throughout (See Literature Cited). In all cases sources of data and analyses were evaluated for accuracy and appropriateness. Updates were made where necessary.
- 178** The plan will not change our present Notice to Lessees.
- 179** Yes, the prescriptions of the plan are consistent with existing State laws. There is a degree of duplication in State and BLM requirements.
- 180** Yes. In many instances small areas of No Surface Occupancy can be developed through offset drilling or may be included in communitization or unit agreements.
- 181** The loss of habitat and intrusion of man almost always results in the loss of wildlife. Only a few species in a few situations benefit from man's activities.
- 182** Intense ORV use can have major impacts on wildlife populations just as oil and gas development can. However, ORV use in the planning area is generally limited and dispersed. See Chapter 4 of the draft RMP.
- 183** This would appear to be true in a purely economic sense; however, with the passage of FLPMA, lands in federal ownership are to be retained unless disposal of a parcel would be in the public interest. In most instances it is not economical to manage isolated parcels unless a valuable or critical resource is present. In this RMP the preferred method of disposing of isolated tracts is to exchange them for consolidated parcels of land that would be more manageable and would offer equal or greater public benefit.
- 184** Only U.S. citizens can purchase public lands.
- 185** The emphasis under Alternative D is different from that under Alternative C. See Chapter Two, Alternative Formulation, this document.
- 186** Yes. See Appendix C, Special Lease Stipulations, this document.
- 187** See Appendix C, Special Lease Stipulations, this document.
- 188** About two percent of BLM surface lands fall within CSAs (see page 46 of the draft). About 90 percent of BLM surface lands would be within special oil and gas lease stipulation review areas under Alternatives C and D.
- 189** The RMP can be modified through maintenance, amendment, or revision. Maintenance involves

only minor updates or adjustments which do not substantially alter the planning decisions or outcome of related analyses. Amendments are used when new circumstances, public opinion, or monitoring indicate the need for changes in or additions to original planning decisions. Revisions are made when substantial changes to the entire plan are necessary (43 CFR 1610.5).

If public opinion identifies major shortcomings in existing plans, the appropriate modifications will be made.

190 Study of Map K-1 in conjunction with the acreages in Appendix K of the draft will clarify the situation. An improved map will be available in the RMP desk document after the RMP is finalized.

191 No, See Chapter One, Description of the Planning Area.

192 The plan has been designed to be consistent with resource-related plans of other Federal Agencies, State and Local Governments, and Indian tribes. Management actions subsequent to the RMP will also be reviewed for consistency with these plans.

193 Buried pipelines are not considered to be surface occupancy. See Appendix C, this document.

194 We have little evidence indicating coal companies cancelling lease agreements with landowners because of our exclusion of areas under previous planning. However, a combination of exclusion of areas from further consideration in the RMP, the current soft market for coal and surplus of electrical power in the upper midwest may cause more surface lease agreements to be dropped by coal companies in the near future. We do not know how great the number might be because agreements are between the landowner and company.

195 Our opinion is that future coal development would most likely occur in areas adjacent to existing mines and end use facilities; primarily near Beulah, Center and Underwood. However, development elsewhere in the state is entirely possible and is closely tied to development costs and the demand for coal.

196 Correction made.

197 See Ground Water, page 130 of the draft RMP.

198 In the Washburn CSA, wildlife threshold acreages are for wooded draws and riparian habitats.

There are no federal oil and gas resources within a 3.5 mile radius and in the viewshed of the Knife River Indian Villages National Historic Site. In cooperation with Theodore Roosevelt National Park a 3.5 mile radius was determined as the minimum distance needed to protect the viewshed of National Park Service Units.

199 Appendix H, Generic Mine Scenario, has been revised. See "Errata and Changes to Text," Appendix H, page 130.

Even though the lignite and shallow aquifers will be impacted, replacement water may be obtained from deeper fresh water aquifers not impacted by surface mining.

200 All seams of federal coal that are economically feasible to mine under current technology are required to be removed. Such things as the ratio of coal to overburden, coal quality, etc. are all considered.

201 Photos of each parcel are taken for future reference. Appraisals are conducted on a comparable sales basis. Comparable sales best indicate the value of the land for the type of transactions that BLM processes. Only most recent sales having physically comparable land in proximity to the parcel being appraised are used. Appraisals are reviewed every six months to determine if there has been any change in the local market. If a change has occurred, the appraisal is adjusted.

202 Yes.

203 Exchange pooling is a new undertaking in the District. Inexperience of BLM's proponent in this action may have resulted in over-aggressiveness.

204 During the development of the RMP/EIS, we analyzed the impacts to soil and vegetation in the Big Gumbo from ORV use. Most impacts occur during the wet months (generally March through May) when the ground is thawing and saturated, and easily disturbed. During the rest of the year impacts from ORV use is minimal. Since impacts from ORV use are minimal during most of the year there is no compelling reason to place yearlong restrictions on ORV use. As a result, in our proposed alternative, we restrict ORV use in the Big Gumbo from March 1 to June 1.

205 The current level of recreational use in the Big Gumbo area is not sufficient to actively regulate such use nor is it sufficient for the development of campgrounds and other facilities. Activity plans will be developed, outlining necessary management actions and facilities, if public demand increases substantially.

- 206** See Glossary of this document.
- 207** See Chapter Two, Management Guidance Common To All Alternatives, Wildlife Habitat Management, this document.
- 208** District policy is to offer a parcel being considered for sale to the owner of surrounding or adjacent private land.

ERRATA AND CHANGES TO TEXT

CHAPTERS THREE AND FOUR APPENDICES H, I, J, L, M, AND O, MAPS

This section includes the changes to be made to the portions of the draft RMP/EIS that have not been reprinted in this document.

The changes are listed in the order of presentation in the draft document. Paragraphs are numbered starting with the first *complete* paragraph on each page. Changes to be made to maps are listed by legal description.

Chapter Three — Affected Environment

- Page 29 Para. 6 In first sentence delete “and National.”
- Page 29 Para. 8 Replace 6th sentence with: “Haul roads, construction activities, and agricultural practices are also major sources of fugitive dust.”
- Page 29 Para. 9 Replace fifth sentence with: “Comparison between the monitoring site results and the AAQS (Table 3-2) indicates that violations of the North Dakota 24-hour maximum SO₂, 1-hour SO₂ AAQS, and the North Dakota 1/2-hour average H₂S AAQS occur as a localized problem associated with specific oil and gas development sources.”
- Page 31 Delete subheading “Total Suspended Particulates.”
- Page 31 Para. 1 Replace paragraph 1 with: “Standards apply only to areas outside the controlled property of a given facility.”
- Page 31 Para. 4 Replace last sentence with: “The 24-hour state standard was exceeded once at the Lone Butte site, and the annual standard was not exceeded.”
- Page 31 Para. 5 In first sentence insert “AAQS SO₂” after “federal.”
- Page 31 Para. 5 Delete last sentence.
- Page 31 Para. 6 Replace last sentence with: “At the Theodore Roosevelt National Park — North Unit and Dunn Center, the highest recorded levels of SO₂ are associated with infrequently occurring calm or light wind conditions while moderate wind speeds at Lone Butte (15 mph) were associated with the highest measured SO₂ concentrations.”
- Page 31 Para. 7 In first sentence insert “the North Unit of” before “Theodore.”
- Page 31 Para. 8 In first sentence insert “(45 ug/m³)” after “concentration.”
- Page 31 Tab. 3-1 Replace Table 3-1 with:

TABLE 3-1
1984 POLLUTION DATA SUMMARY

Pollutant	Location	No. of Observations	1-Hour Maximum Concentration (ug/m ³)		3-Hour Maximum Concentration (ug/m ³)		24-Hour Maximum Concentration (ug/m ³)		AMC ² (ug/m ³)
			1st Observ.	2nd Observ.	1st Observ.	2nd Observ.	1st Observ.	2nd Observ.	
Sulfur Dioxide	Dunn Center	8,231	76	73	57	55	24	19	4
SO ₂	TRNP-N ¹	8,263	105	94	41	78	41	29	4
	Lone Butte	8,049	1,038	1,003	786	723	311	259	31
Hydrogen Sulfide (H ₂ S)	TRNP-N ¹	16,169	581	570	—	—	—	—	4
	Lone Butte	16,532	3,542	2,705	—	—	—	—	60
			24-Hour Maximum Concentration (ug/m ³)			Annual Geometric Mean (ug/m ³)		AMC ² (ug/m ³)	
			1st Observ.	2nd Observ.	3rd Observ.				
Total Suspended Particulate (TSP)	Mandaree	53		102	96		25		31
	Dunn Center	56		117	106		19		26
	TRNP-N	51		239	94		23		36

¹Theodore Roosevelt National Park-North Unit.

²Arithmetic Mean Concentration

³1/2-Hour Maximum

TABLE 3-2
NORTH DAKOTA AND NATIONAL AIR QUALITY STANDARDS FOR SELECTED POLLUTANTS

Pollutant	North Dakota Standard	Federal Primary Standard	Federal Secondary Standard
Total Suspended Particulates	60 ug/m ³ annual geo. mean. 150 ug/m ³ 24-hr average ¹	75 ug/m ³ annual geometric mean 260 ug/m ³ 24-hr average ¹	60 ug/m ³ annual geometric mean 150 ug/m ³ 24-hr average ¹
Sulfur Dioxide	60 ug/m ³ annual average 260 ug/m ³ 24-hr average 715 ug/m ³ ppm 1-hr average ¹	80 ug/m ³ annual average 365 ug/m ³ 24-hr average ¹	1300 ug/m ³ 3-hr average
Nitrogen Dioxide	100 ug/m ³ annual average 200 ug/m ³ 1-hr average ¹	100 ug/m ³ annual average	100 ug/m ³ annual average
Hydrogen Sulfide ⁵	45 ug/m ³ 1/2-hr average ² 75 ug/m ³ 1/2-hr average ⁴	None None	None None

¹Not to be exceeded.²Not to be exceeded more than twice in any five days.³Not to be exceeded more than 1% of the time in any 3-month period.⁴Not to be exceeded over twice per year.⁵H₂S is not a health standard but is a state welfare standard.

Page 32 Para. 1 In third sentence replace "Wildlife Refuge" with "Wilderness Area."

Page 32 Tab. 3-3 Under the heading "North Dakota" replace "30" with "37."

Page 32 Para. 2 In first sentence insert "SO₂" after "Class II."

Page 32 Para. 4 In last sentence insert "vicinity of the" before "fields are."

Page 32 Para. 5 Add to end of paragraph: "there are no known locatable minerals in North Dakota."

Page 34 Para. 2 Replace "September 30, 1984, was 1,894" in first sentence with "January 23, 1985, was 2,042."

Page 34 Para. 3 Add to end of first sentence: "which are found in cretaceous sedimentary rocks or in paleozoic evaporites."

Page 34 Para. 6 Delete first sentence.

Page 34 Insert new paragraph after paragraph 9: "Prime farmland is scattered throughout the CSAs. It is the land best suited for production of food, feed, forage, fiber, and oilseed crops (USDA 1984). Prime farmland acreage is generally limited to 0 to 15 percent of the total land area in the western portion of North Dakota, mostly due to the lack of precipitation and high evapotranspiration. It is usually found in slightly concave positions on the landscape and along some drainages that receive added runoff moisture from surrounding slopes. Prime farmland has been identified in counties with completed modern detailed soil surveys (1:20,000 scale). NDPSC, Rules Governing the Reclamation of Surface-Mined Land (NDPSC 1987), specifically outline the procedures for prime farmland investigation, determination, and performance standards on proposed mine areas."

Page 35 Para. 4 Replace second sentence with: "About 48 percent of the surface over federal coal in the CSAs is dominated by soils in LCCs II, III, IV."

Page 35 Tab. 3-6 Add footnote 3 to heading Dominant Land Capability Classes (LCCs): "Class I would fall into the 'High' category but none are recognized in North Dakota. Most Class V soils in North Dakota are found in small wetlands (potholes, marshes, etc.) and comprise an insignificant part of the total acreage in the CSAs. LCCs III and IV include soils that fall into both the 'High' and 'Moderate' reclamation success categories."

Page 35 Tab. 3-6 In right-most column replace "I, II, III" with "II, III, IV."

Page 35 Tab. 3-6 In right-most column replace "IV, V, VI" with "III, IV, VI."

Page 39 Para. 5 Replace last sentence with: "Total dissolved solid concentrations are usually 1000-3000 mg/l but locally will range from 300-4000 mg/l."

Page 42 Para. 1 Replace first two sentences with: "Ground water in this part of North Dakota consists of several formations above 2000 feet that yield good quality water."

Page 43 Para. 12 Replace paragraph with: "At this time, there are no federally listed threatened or endangered plant species in North Dakota (Smith 1985). However, there are three species listed as 'Category 2', which means that there is insufficient information at present to judge their status. These are: (1) yellow cress, which has yet to be found in North Dakota, (2) prairie fringed orchid, which is locally abundant in the south eastern part of the state, and (3) Visser's buckwheat, which is found in the central part of the state."

- Page 44 Para. 4 Replace the second sentence with: "Breeding colonies occur between Garrison Dam and Oahe Reservoir on the Missouri River and on sandbars in the Yellowstone River near the Montana — North Dakota border."
- Page 44 Para. 6 Add the following counties: "Kidder, McHenry, Pierce, McKenzie."
- Page 46 Para. 11 Replace the word "pipeline" with "powerlines."
- Page 47 Tab. 3-9 Under heading "Surface and Mineral Ownership Acres", for Bowman County the number should be "32,580"; for Burleigh County the number should be "863"; for Mountrail County the number should be "1,037"; for the Total, the number should be "67,571."
- Page 51 Para. 8 Replace first sentence with: "North Dakota has a coal severance tax, a coal conversion facilities privilege tax, an oil and gas gross production tax, and an oil extraction tax."
- Page 51 Insert after paragraph 8: "The oil and gas gross production tax is applied at the rate of 5 percent of the wellhead value of either oil or gas. Revenues are split between the State General Fund and the counties of production with the split determined by the amount of production. Oil and gas gross production tax collection totaled 73 MM dollars in FY85."
- The oil extraction tax is levied at the rate of 6.5 percent of the wellhead value of the oil; gas is not taxed under this law. Ninety percent of the proceeds from this tax is apportioned to the State General Fund. The remaining 10 percent goes to the Southwest Water Pipeline Sinking Fund and the Resources Trust Fund which makes money available for the construction of water supply facilities and to fund energy conservation and renewable energy resource programs. In FY85, these revenues totaled 78 MM dollars."
- Page 52 Para. 9 Replace last two sentences with: "Family incomes are much lower, resulting in higher proportions of the populations having incomes that fall below the poverty level. Unemployment rates are much higher, and a higher number of the housing units lack plumbing for exclusive use."

CHAPTER FOUR — Environmental Consequences

- Page 55 Add following paragraph 3: "Assessments of environmental consequences are based on data collected by BLM and retained in the MSO or Dickinson District Office, data submitted by interested parties following a call for resource information made at the onset of preparation of the plan, data made available by State and Federal Agencies, and data recorded in published reports or documents."
- During the assessment of impacts, there were no specific data inadequacies identified that were relevant to the level of detail and decisions examined in this environmental impact statement. In some instances available data were used to develop a range of probable impacts where it was not possible or feasible to arrive at a specific figure.
- Future assessment and data needs are identified here and in Chapter Two where final implementation of a decision would require an additional level of analysis."
- Page 56 Para. 4 Replace "9,580" with "9,539."
- Page 56 Para. 6 Replace last sentence with: "NSO stipulations would require the lessee to obtain more complete geologic information than if conventional drilling methods were used, resulting in increased expenses due to the additional time and equipment required for directional drilling and the potential increased costs of obtaining access to an off-lease drill site."
- Page 56 Para. 12 Replace "9,580" with "9,539."
- Page 56 Para. 16 Replace "9,580" in second sentence with "9,539."
- Page 57 Para. 3 Replace "exchange" in first sentence with "land ownership adjustment."
- Page 57 Para. 3 Replace "disposed" in second sentence with "transferred."
- Page 57 Para. 8 Replace "67,520" in first sentence with "67,571."
- Page 57 Para. 8 Replace "9,580" in second sentence with "9,539."
- Page 57 Para. 15 Replace "9,580" with "9,539."
- Page 57 Para. 15 Replace "disposal" in first sentence with "land ownership adjustment."
- Page 57 Para. 15 Replace "Disposal" in second sentence with "Transfer."
- Page 57 Para. 16 Replace "Disposal of" in first sentence with "Patenting."

Page 58 Para. 7 Replace “9,580” in second sentence with “9,539.”

Page 58 Para. 9 Replace “9,580” with “9,539.”

Page 58 Para. 9 Replace “Disposal or exchange” in first sentence with “Land ownership adjustment.”

Page 58 Para. 9 Replace “disposed” in second sentence with “transferred.”

Page 59 Para. 2 Replace “67,520” in first sentence with “67,571.”

Replace “9,580” in second sentence with “9,539.”

Page 59 Para. 11 Replace “9,580” with “9,539.”

Page 59 Para. 11 Replace “disposal” in first sentence with “land ownership adjustment.”

Page 59 Para. 11 Replace “Disposal of” in second sentence with “Transferring.”

Page 60 Para. 2 Replace “9,580” with “9,539.”

Page 60 Para. 9 Replace “9,580” with “9,539.”

Page 60 Para. 9 Replace “9,580” in second sentence with “9,539.”

Page 60 Para. 10 Insert at the end of the paragraph: “(C&MU classifications affected by Civil Action 85-2238; see Chapter Three, Lands.)”

Page 60 Para. 11 Replace “57,940” with “58,032.”

Page 60 Para. 12 Replace “27,433” in first sentence with “27,474.”

Replace “15,405” in second sentence with “15,404.”

Page 60 Para. 13 Replace “9,580” with “9,539.”

Page 60 Para. 13 Replace “9,580” in first sentence with “9,539.”

Page 60 Para. 15 Replace “9,580” with “9,539.”

Page 61 Para. 1 Insert before last sentence: “Additionally, National Park Service units are highly valued resources. Mitigation may be necessary to maintain the high visual qualities of these areas.”

Page 61 Para. 2 Replace “9,580” with “9,539.”

Page 61 Para. 2 Replace “disposal” in first sentence with “land ownership adjustment.”

Page 61 Para. 6 Replace “9,580” and “67,520” with “9,539” and “67,571”, respectively.

Page 61 Para. 8 Replace paragraph 8 with: “Previous MFP decisions are affected by the changes in criterion 7. The Golden Valley MFP found the A.C. Townley homestead unsuitable for coal leasing under criterion 7 and in the West-Central addendum it was recommended that all sites within the eligible KRF National Register District be excluded under criterion 7 from further consideration except those sites in Section 32 and 34 (the feasibility of mitigation of impacts to cultural resources was being considered in these two sections). In a separate decision, the Secretary of the Interior removed Sections 32 and 34 from Round One of Fort Union leasing. As a result, 2,897 acres were found unsuitable within the eligible KRF District and the remaining 1024 acres were removed from further consideration during round one of Fort Union leasing.”

Page 61 Para. 9 Replace paragraph with: “Although criterion 7 no longer applies to those areas excluded under previous MFPs, these areas still contain regionally or nationally significant cultural resources. For that reason, it is assumed that the 3,931 acres would remain excluded from further consideration as multiple-use tradeoffs.”

Page 61 Para. 10 Replace second sentence with: “Data adequacy problems will be improved at the completion of a Class II survey (a Class II survey is, in this case, an on-the-ground sample survey — for a complete discussion on the types of surveys employed by the BLM see BLM manual 8111) on five CSAs located in the Southwest and McKenzie-Williams MFP areas.”

Page 62 Para. 4 Replace “9,580” with “9,539.”

Page 62 Para. 4 Replace “Disposal” in first sentence with “Land ownership adjustment.”

Page 62 Para. 5 Replace “10,040” with “9,539.”

Page 62 Para. 7 Replace second sentence with: “Standard stipulations require that lands affected by development are examined by a Bureau-approved cultural resource professional to determine if cultural resources are present within the proposed impact area (Examination will usually consist of an on-the-ground survey of the impact area unless the area has been previously surveyed or extensively disturbed). Measures considered to reduce the level of harm to cultural resources were identified in Chapter Two, but would include avoidance by project relocation or mitigation by extensive documentation/recordation or through data recovery (archaeological sites).”

Page 62 Para. 9 Replace “9,580” and “67,520” with “9,539” and “67,571”, respectively.

Page 62 Para. 15 Replace “9,580” with “9,539.”

Page 65 Para. 1 Replace “597,016” with “599,496.”

Page 65 Para. 8 Replace “597,016 acres (10,972 MM tons)” with “599,496 acres (11,030 MM tons).”

Page 65 Para. 9 Replace “412,632 acres (6,778 MM tons)” in the second sentence with “410,152 acres (6,720 MM tons).”
Replace “597,016” in third sentence with “599,496.”

Page 65 Para. 15 Replace “38,848” with “38,680.”

Page 66 Para. 2 Replace “597,016” and “38,848” with “599,496” and “38,680”, respectively.

Page 66 Para. 6 Replace “597,016” in first sentence with “599,496.”
Replace “38,848” in second sentence with “38,680.”

Page 67 Para. 2 Replace “597,016” and “67,520”, in first sentence with “599,496” and “67,571”, respectively.
Replace “38,848” in second sentence with “38,680.”

Page 67 Para. 7 Replace “38,848” with “38,680.”

Page 67 Para. 7 Replace “disposal” in first sentence with “Land ownership adjustment.”

Page 67 Para. 7 Replace “Disposal” in second sentence with “Transfer.”

Page 67 Para. 8 Replace “Disposal” in first sentence with “Patenting.”

Page 67 Para. 14 Replace “597,016” in first sentence with “599,496.”
Replace “38,848” in second sentence with “38,680.”

Page 68 Para. 2 Replace “38,848” with “38,680.”

Page 68 Para. 2 Replace “Disposal or exchange” in first sentence with “Land ownership adjustment.”

Page 68 Para. 2 Replace “Disposal” in second sentence with “Transfer.”

Page 68 Para. 8 Replace “597,016”, “38,848”, “67,520” with “599,496”, “38,680”, “67,571”, respectively.

Page 69 Para. 2 Replace “597,016” in first sentence with “599,496.”
Replace “151,577” in second sentence with “152,487.”

Page 69 Para. 3 Replace “29,387” with “29,246.”

Page 69 Para. 4 Replace “38,848” with “38,680.”

Page 69 Para. 4 Replace “disposal” in first sentence with “land ownership adjustment.”

Page 69 Para. 4 Replace “Disposal” in second sentence with “Transfer.”

Page 69 Para. 5 Replace “Disposal” in first sentence with “Patenting.”

- Page 69 Para. 11 Replace “597,016” and “38,848” with “599,496” and “38,680”, respectively.
- Page 70 Para. 4 Replace “38,848” and “58 percent” with “38,680” and “57 percent.”
- Page 70 Para. 5 Replace “21,282” in first sentence with “21,502.”
- Page 70 Para. 7 Replace “38,848” with “38,680.”
- Page 70 Para. 8 Insert at the end of the paragraph: “(C&MU classifications affected by Civil Action 85-2238; see Chapter Three, Lands.)
- Page 70 Para. 10 Replace “597,016” and “38,848” with “599,496” and “38,680”, respectively.
- Page 70 Para. 12 Insert before last sentence: “Additionally, National Park Service units are highly valued resources. Mitigation may be necessary to maintain the high visual qualities of these areas.”
- Page 70 Para. 13 Replace “38,848” with “38,680.”
- Page 70 Para. 13 Replace “disposal” in first sentence with “land ownership adjustment.”
- Page 71 Para. 3 Replace with: “Under multiple-use tradeoff, 3,801 acres of federal coal were dropped from further consideration for coal leasing due to the regional or national significance of the cultural resources. Included is all Federal coal within the eligible Knife River Flint Historic District and Writing Rock State Historic site.”
- Page 71 Para. 2 Replace “597,016” and “38,848” with “599,496” and “38,680”, respectively.
- Page 71 Para. 6 Replace “38,848” with “38,680.”
- Page 71 Para. 6 Replace “disposal” in first sentence with “land ownership adjustment.”
- Page 71 Para. 11 Replace “597,016” and “38,848” with “599,496” and “38,680” respectively.
- Page 72 Para. 1 Replace “597,016” and “38,848” with “599,496” and “38,680”, respectively.
- Page 73 Table Replace with the following table:

**ALTERNATIVE B
SUMMARY OF COAL SCREENS**

CSA	Acres Federal Coal	Unsuit.	ACRES EXCLUDED		Wildlife Threshold ¹	Acres Acceptable
			Multiple Use	Surface Owner		
ANTELOPE	32360	910	2014	0	1354	29436
ARNEGARD	25020	105	1774	10561	859	12580
BEULAH-ZAP	57200	10274	1556	1779	1485	43591
BOWMAN-GASCOYNE	21320	231	1395	0	868	19694
CENTER-STANTON	27480	1197	1640	1120	1054	23523
DICKINSON	108628	6842	40263	9050	199	52473
DIVIDE	3760	461	0	480	0	2819
DUNN CENTER	88560	5196	3766	14315	639	65283
ELGIN-NEW LEIPZIG	14400	325	92	240	92	13743
ELKHORN	25380	267	2512	4070	2512	18531
FORTUNA	19400	8539	1875	1676	56	7310
GARRISON	12660	4067	5623	627	0	2343
GOLDEN VALLEY	21960	850	861	2478	0	17771
HANKS	47100	2917	2188	3084	1901	38911
KEENE	122700	14600	45496	16304	3148	46300
MOTT	42200	806	279	0	279	41115
NEW ENGLAND	95800	5569	277	11889	162	78065
NIOBE	160	0	0	0	0	160
SAND CREEK	57240	1761	5742	7906	616	41831
TOBACCO GARDEN	64060	50385	0	3884	0	9791
UNDERWOOD	2600	995	0	0	0	1605
VELVA	20280	16122	1525	0	0	2633
WASHBURN	1360	85	86	0	86	1189
WILLISTON	98020	60878	8189	154	217	28799
TOTAL	1009648	193382	127153	89617	15527	599496

¹Wildlife threshold acreages are included in multiple use.

Page 74 Para. 1 Replace “571,388” and “206,117” with “573,868” and “206,811”, respectively.

Page 74 Para. 8 Replace “571,388 acres (10,533 MM tons)” with “573,868 acres (10,591 MM tons).”

Page 74 Para. 9 Replace “438,260 acres (7,217 MM tons) in second sentence with “435,780 acres (7,159 MM tons).”
Replace “571,388” in third sentence with “573,868.”

Page 74 Para. 14 Replace “22,819”, “11,844”, “206,117” with “22,739”, “11,715”, “206,811”, respectively.

Page 75 Para. 2 Replace “206,117” with “206,811.”

Page 75 Para. 4 Replace “571,388”, “22,819”, “11,844” with “573,868”, “22,739”, “11,715”, respectively.

Page 75 Para. 8 Replace “571,388” in first sentence with “573,868.”
Replace “22,819” and “11,844” in second sentence with “22,739” and “11,715”, respectively.

Page 75 Para. 11 Replace “disposal or exchange” in first sentence with “land ownership adjustment.”

Page 76 Para. 4 Replace “571,388” in first sentence with “573,868.”
Replace “22,819” and “11,844” in second sentence with “22,739” and “11,715”, respectively.

Page 76 Para. 9 Replace paragraph with: “Federal coal acres overlying buried-valley aquifers found acceptable for further (12,318 acres) consideration would be evaluated on a site-by-site basis and stipulated if necessary to prevent irreversible and irretrievable damage to the hydrology of the aquifer (Appendix F).”

Page 76 Para. 9 Replace “Disposal” in second sentence with “Transfer.”

Page 76 Para. 10 Replace “22,819” and “11,844” with “22,739” and “11,715”, respectively.

Page 76 Para. 10 Replace “Disposal of” in first sentence with “Patenting.”

Page 77 Para. 2 Replace “571,388” in first sentence with “573,868.”
Replace “22,819” and “11,844” in second sentence with “22,739” and “11,715”, respectively.

Page 77 Para. 4 Replace “22,819” and “11,844” with “22,739” and “11,715”, respectively.

Page 77 Para. 11 Replace “571,388” in first sentence with “573,868.”
Replace “22,819” and “11,844” in second sentence with “22,739” and “11,715”, respectively.
Replace “206,117” in third sentence with “206,811.”

Page 78 Para. 6 Replace “571,388” and “149,470” with “573,868” and “150,380”, respectively.

Page 78 Para. 8 Replace “22,819” and “11,844” with “22,739” and “11,715”, respectively.

Page 78 Para. 8 Replace “Disposal” in second sentence with “Transfer.”

Page 78 Para. 12 Replace “206,117” with “206,811.”

Page 79 Para. 1 Replace “571,388”, “22,819”, “11,844” with “573,868”, “22,739”, “11,715”, respectively.

Page 79 Para. 8 Replace “34,663” in second sentence with “34,454.”
Replace “44,701” in fourth sentence with “44,832.”

Page 79 Para. 8 Replace second sentence with: “There would be a long-term opportunity for repositioning land ownership on up to 34,454 acres including exchange-only areas.”

Page 79 Para. 9 Replace “28,490” in first sentence with “28,361.”
Replace “4,427” in second sentence with “4,298.”

Page 79 Para. 13 Replace “22,819” with “22,739.”

- Page 79 Para. 14 Replace third sentence with: "Adjusting land ownership by exchange would balance the impacts of the disposal of public land with those of acquisition of private land and would result in a net increase in public values."
- Page 79 Para. 16 Insert at the end of the paragraph: "(C&MU classifications affected by Civil Action 85-2238; see Chapter Three, Lands)."
- Page 79 Para. 18 Replace "571,388", "22,819", "11,844" with "573,868", "22,739", "11,715", respectively.
- Page 80 Para. 2 Insert before last sentence: "Additionally, National Park Service units are highly valued resources. Mitigation may be necessary to maintain the high visual qualities of these areas."
- Page 80 Para. 3 Replace "22,819" and "11,844" with "22,739" and "11,715", respectively.
- Page 80 Para. 8 Replace with: "Under multiple-use tradeoffs, 3,801 acres of federal coal were dropped from further consideration for coal leasing due to the regional or national significance of the cultural resources. Included is all Federal coal within the eligible Knife River Flint Historic District and Writing Rock State Historic site."
- Page 80 Para. 7 Replace "571,388", "22,819", "11,844" with "573,868", "22,739", "11,715", respectively.
- Page 81 Para. 1 Replace "22,819" and "11,844" with "22,739" and "11,715", respectively.
- Page 81 Para. 4 Add to the end of paragraph 4: "Cultural resources potentially impacted by development would be avoided by relocation of the project or mitigated by documentation/recordation or through a data recovery program."
- Page 81 Para. 6 Replace "571,388", "22,819", "11,844", with "573,868", "22,739", "11,715", respectively.
- Page 81 Para. 13 Replace "571,388", "22,819", "11,844", "206,117", "22,164" with "573,868", "22,739", "11,715", "206,811", respectively.
- Page 83 Table Replace with the following table:

**ALTERNATIVE C
SUMMARY OF COAL SCREENS**

CSA	Acres Federal Coal	Unsuit.	ACRES EXCLUDED		Wildlife Threshold ¹	Acres Acceptable
			Multiple Use	Surface Owner		
ANTELOPE	32360	910	3436	0	1082	28014
ARNEGARD	25020	105	3108	10517	2147	11290
BEULAH-ZAP	57200	10274	4013	1779	1627	41134
BOWMAN-GASCOYNE	21320	231	1828	0	1301	19261
CENTER-STANTON	27480	1197	2457	1120	1316	22706
DICKINSON	108628	6842	42877	8882	290	50027
DIVIDE	3760	461	0	480	0	2819
DUNN CENTER	88560	5196	5339	14315	382	63710
ELGIN-NEW LEIPZIG	14400	325	399	240	219	13436
ELKHORN	25380	267	4185	3911	2442	17017
FORTUNA	19400	8539	2028	1636	169	7197
GARRISON	12660	4067	5623	627	0	2343
GOLDEN VALLEY	21960	850	692	2478	0	17940
HANKS	47100	2917	6663	2755	3947	34765
KEENE	122700	14600	49462	16085	5618	42553
MOTT	42200	806	1591	0	1300	39803
NEW ENGLAND	95800	5569	1266	11770	196	77195
NIOBE	160	0	0	0	0	160
SAND CREEK	57240	1761	8406	7298	2328	39775
TOBACCO GARDEN	64060	50385	283	3796	0	9596
UNDERWOOD	2600	995	0	0	0	1605
VELVA	20280	16122	1596	0	0	2562
WASHBURN	1360	85	273	0	130	1002
WILLISTON	98020	60878	9030	154	811	27958
TOTAL	1009648	193382	154555	87843	25305	573868

¹Wildlife threshold acreages are included in multiple use.

Page 84 Para. 1 Replace “484,592” with “487,072.”

Page 84 Para. 9 Replace “484,592 acres (9,233 MM tons)” with “487,072 acres (9,291 MM tons).”

Page 84 Para. 10 Replace “525,056 acres (8,517 MM tons)” in second sentence with “522,576 acres (8,459 MM tons).”
Replace “484,592” in third sentence with “487,072.”

Page 84 Para. 15 Replace “106,620” with “107,314.”

Page 85 Para. 1 Replace “106,620” with “107,314.”

Page 85 Para. 2 Insert in sentence three before “irreversible”, “but not.”

Page 85 Para. 4 Replace “484,592” with “487,072.”

Page 85 Para. 6 Replace “484,592” in first sentence with “487,072.”

Page 85 Para. 15 Replace “484,592” with “487,072.”

Page 86 Para. 3 Replace last sentence with: “These acreages will protect the buried-valley aquifers in 17 CSAs (32,273 acres) and the City of Dickinson’s municipal watershed (38,536 acres).”

Page 86 Para. 6 Replace “no exchange of” in first sentence with “not exchanging.”

Page 86 Para. 12 Replace “484,592” in first sentence with “487,072.”

Page 87 Para. 5 Replace “484,592” in first sentence with “487,072.”
Replace “106,620” in second sentence with “107,314.”

Page 88 Para. 4 Replace “484,592” in first sentence with “487,072.”
Replace “110,120” in second sentence with “111,030.”

Page 88 Para. 10 Replace “106,620” in first sentence with “107,314.”

Page 88 Para. 11 Replace “254,277” with “253,583.”

Page 88 Para. 12 Replace “484,592” with “487,072.”

Page 89 Para. 4 Replace the last sentence with: “The long-term land ownership pattern would remain fixed.”

Page 89 Para. 7 Insert at the end of the paragraph: “(C&MU classifications affected by Civil Action 85-2238; see Chapter Three, Lands).”

Page 89 Para. 9 Replace “484,592” with “487,072.”

Page 89 Para. 11 Insert before last sentence: “Additionally, National Park Service units are highly valued resources. A protective buffer zone may be necessary to maintain the high visual qualities of these areas.”

Page 89 Para. 16 Replace “484,592” with “487,072.”

Page 90 Para. 1 Replace with: “Under multiple-use tradeoff, 3,801 acres of federal coal were dropped from further consideration for coal leasing due to the regional or national significance of the cultural resources. Included is all Federal coal within the eligible Knife River Flint Historic District and Writing Rock State Historic site.”

Page 90 Para. 8 Replace second sentence with: “Adverse impacts to cultural resources would be avoided by project relocation or mitigation by documentation/recordation or through a data recovery program.”

Page 90 Para. 9 Replace “484,592” with “487,072.”

Page 90 Para. 15 Replace “484,592” and “106,620” with “487,072” and “107,314.”

Page 92 Table Replace with the following table:

**ALTERNATIVE D
SUMMARY OF COAL SCREENS**

CSA	Acres Federal Coal	Unsuit.	ACRES EXCLUDED		Threshold ¹	Acres Acceptable
			Multiple Use	Surface Owner		
ANTELOPE	32360	910	7065	0	153	24385
ARNEGARD	25020	105	8320	10082	5042	6513
BEULAH-ZAP	57200	10274	18523	55	0	28348
BOWMAN-GASCOYNE	21320	231	2890	0	1602	18199
CENTER-STANTON	27480	1197	3854	1120	296	21309
DICKINSON	108628	6842	47614	8009	371	46163
DIVIDE	3760	461	29	480	0	2790
DUNN CENTER	88560	5196	14017	12585	491	56762
ELGIN-NEW LEIPZIG	14400	325	887	240	377	12948
ELKHORN	25380	267	10232	3610	1723	11271
FORTUNA	19400	8539	4371	1517	336	4973
GARRISON	12660	4067	5837	558	0	2198
GOLDEN VALLEY	21960	850	940	2360	0	17810
HANKS	47100	2917	12911	1917	3351	29355
KEENE	122700	14600	72358	9123	1122	26619
MOTT	42200	806	5274	0	1031	36120
NEW ENGLAND	95800	5569	2463	11668	92	76100
NIOBE	160	0	0	0	0	160
SAND CREEK	57240	1761	15991	6514	3802	32974
TOBACCO GARDEN	64060	50385	2665	3103	0	7907
UNDERWOOD	2600	995	189	0	0	1416
VELVA	20280	16122	1992	0	0	2166
WASHBURN	1360	85	588	0	0	687
WILLISTON	98020	60878	17089	154	0	19899
TOTAL	1009648	193382	256099	73095	19789	487072

¹Wildlife threshold acreages included in multiple use.

Appendix H – Generic Mine Scenario

Page 129 Para. 6 Delete second sentence.

Page 129 Para. 6 Add to end of last sentence: “and consumes only a portion of the Class II PSD annual increment for particulates (19 ug/m³).”

Page 129 Para. 8 In third sentence, replace “100 ug/m³” with 10 ug/m³” and replace “147 ug/m³” with “57 ug/m³.”

Page 129- Para. 14 Insert at end of second sentence: “(Doll et al. 1984 a, b).”
130

Page 130 Para. 4 Insert new paragraph after paragraph 4: “Runoff can cause large quantities of sediment to be deposited into stream channels under pre-mining conditions. This is due to geology, varying land uses in the area, surface conditions, and vegetative cover. Throughout the planning area runoff which reaches the stream channels is highly variable in quantity and quality. Mining activities will result in areas which are highly susceptible to accelerated erosion. The mining lessee will be required to prevent significant changes in runoff quantity and quality from the mine area through the use of runoff and sediment control measures.”

Page 130 Para. 7 Replace last sentence with: “Studies have shown that a ‘mine floor aquifer’ may be formed due to an increase in hydraulic conductivity, storage capacity, vertical permeability of the spoil materials, and to the mining method (Van Voast 1981, Van Voast et al. 1977).”

Page 130 Para. 7 Insert new paragraph after paragraph 7: “This aquifer may have substantial increases in sodium, sulfates, and total dissolved solids. These increases will be variable and dependent on overburden characteristics and reclamation practices. Increases in these constituents may preclude the use of the mine floor aquifer as a fresh water source.”

Page 130 Para. 10 Add sentence to end of paragraph: “The NDS DH, Division of Hazardous Waste Management and Special Studies is the lead agency in regulating waste disposal, including that generated by power plants in coal mine areas.”

- Page 132 Para. 5 Replace paragraph 5 with: “Before the Bureau issues a lease or approves of a mine proposal an assessment of impacts to eligible cultural resources would be conducted in consultation with the SHPO and the Advisory Council on Historic Preservation. Based on that consultation the Bureau would recommend areas which would have the least impact on cultural resources. The Bureau would also require additional inventory/evaluation as a lease stipulation in areas potentially effected by mine development. Bureau lease stipulations on the treatment and consideration of cultural resources would be contained in lease application documentation submitted to the OSMRE. OSMRE and NDPSO implement lease stipulations and are responsible for ensuring compliance with 36 CFR 800 once lease has been issued.”

Appendix I — Generic Mine Scenario

- Page 135 Para. 6 Replace paragraph 6 with: “Prior to facility site selection, an assessment of impacts to eligible cultural resources would be conducted in consultation with the SHPO and the Advisory Council on Historic Preservation. Based on that consultation, the Bureau would recommend areas which would have the least impact on cultural resources. The Bureau would also require additional inventory/evaluation as a lease stipulation in areas potentially effected by construction of an end use facility. Bureau lease stipulations on the treatment and consideration of cultural resources would be contained in lease application documentation submitted to the OSMRE. OSMRE and NDPSO implement lease stipulations and are responsible for ensuring compliance with 36 CFR 800 once lease has been issued.”
- Page 135 Para. 8 Insert after paragraph 8: “Construction of an end use facility would contrast with the uniform landscape of western North Dakota. Dust produced from the structure’s construction and operation would diminish the quality of daytime sightseeing. Night sky viewing would also be impacted by a combination of dust and light pollution.”
- Page 135 Para. 9 Delete.
- Page 135 Para. 10 Delete.
- Page 135 Para. 11 Replace first sentence with: “The penetration of the skyline by the facility in views from communities and major transportation corridors would have an immediate impact on visual resources.”
- Page 137 Add after paragraph 5: “The economic stimulus associated with plant and mine development has been referred to as the boom part of the boom/bust cycle. There are really two aspects to the boom portion of this cycle. The first is the two to three year peak construction phase which is the most intense part of the boom period. Often the end of the peak construction phase has been referred to as the bust part of the cycle because there is a significant reduction in the overall level of employment and spending. However, the long-term operations phase which occurs next continues for 30 to 40 years and represents a level of economic activity greater than that which would have occurred without plant and mine development. Communities can experience problems if they expand services to meet the peak construction phase workforce. After the peak construction workforce leaves, the community is faced with financing the capital intensive public service improvements which puts the burden on the people who remain in the community past the peak construction period. Economic uncertainties surrounding the optimum level of community service expansion are difficult for most communities to deal with and can result in excessive long-term obligations to the community’s long-term residents.”
- Page 137 Para. 2 In sentence 5, replace “With minor exceptions,” with “Portions of.”
- In sentence 5, insert “directly” after “distributed.”
- Page 140 Para. 1 Add as first complete paragraph: “There would be additional adverse impacts to farm and ranch operations resulting from off-site occurrence of increased dust fallout, loss or degradation of some water sources, etc. The economic impact of these occurrences is unknown.”

Appendix J — Withdrawals and Land Classification

- Page 141 Para. 2 Replace first sentence with: “The time-frame requirements for withdrawal review, FLPMA Section 204(l), does not apply to withdrawals in North Dakota.”
- Page 141 Para. 7 In the second sentence replace “These classifications were reinstated” with “The termination of the classifications were suspended.”
- Page 141 Para. 8 Delete the last sentence.

Appendix L — Oil and Gas Processing Procedures

Page 147 Para. 4 Replace the first sentence with: “When a complete NOS is received, a review is performed to identify the need for associated rights-of-way and special use permits, cultural resource clearances, protection of wildlife and wildlife habitats (as detailed in Appendix C, Special Lease Stipulations, of the final RMP/EIS), or other associated resource concerns.”

MAPS

- | | | |
|-------|----------------|---|
| Map 2 | Beulah Area | The following coal lands are acceptable for further consideration of leasing under Alternatives B, C, and D.

T.144N., R.94W.
Sec. 10, S $\frac{1}{2}$, NW $\frac{1}{4}$
Sec. 15, N $\frac{1}{2}$
T.144N., R.93W.
Sec. 4, E $\frac{1}{2}$, NW $\frac{1}{4}$
Sec. 8, W $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$
T.144N., R.92W.
Sec. 8, E $\frac{1}{2}$ E $\frac{1}{2}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$,
W $\frac{1}{2}$ W $\frac{1}{2}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$
Sec. 18, W $\frac{1}{2}$ |
| Map 3 | Dickinson Area | The following coal lands are excluded from further consideration of leasing due to surface owner opposition under Alternative D.

T.141N., R.99W.
Sec. 20, NE $\frac{1}{4}$, W $\frac{1}{2}$
Sec. 30, NE $\frac{1}{4}$, W $\frac{1}{2}$ |

GLOSSARY, INDEX, AND LITERATURE CITED

GLOSSARY

ACTIVITY PLAN — Activity plan is a generic term for any plan that provides details for management of a specific site. It implements decisions made in a RMP and is the most detailed level of BLM planning. Activity plans may be centered on a single resource. Examples are AMPs for livestock management and HMPs for wildlife management. However, BLM prefers to write activity plans that address all resources on a particular site. In this case, the plan is referred to as a CRMP. Examples of site-specific details included in these plans are: management objectives, location of a fence, placement of signs, dates of grazing by livestock, kinds and density of seeds to be included in seeding, costs of materials, economic analysis, and year action is to be completed.

ALLOTMENT — An allotment is an area of land where one or more livestock operators graze their cows or sheep. BLM, state-owned, and private lands may be included. Allotments are usually bounded by fences and/or natural barriers to livestock movement and are commonly subdivided into pastures to help in vegetation management.

ALLOTMENT MANAGEMENT PLAN (AMP) — An AMP is an activity plan (see above) that gives the details for managing livestock in a specific allotment (see above). The heart of an AMP addresses: (1) the number of livestock that will be allowed in an allotment, (2) the time of the year they will be there, and (3) the length of time they will remain.

ALLUVIAL VALLEY FLOOR (AVF) — The unconsolidated stream-laid deposits holding streams where water availability is sufficient for subirrigation or flood irrigation agricultural activities. Does not include upland areas, which are generally overlain by a thin veneer of colluvial deposits composed chiefly of debris from sheet erosion, deposits by unconcentrated runoff or slope wash, together with talus, or other mass-movement accumulations and windblown deposits.

ALLUVIUM — Unconsolidated clay, silt, sand, and gravel which has been deposited in valley floors by stream action.

AMBIENT AIR QUALITY STANDARDS (AAQS) — The permissible level of various pollutants in the atmosphere, as contrasted with emission standards which are the permissible levels of pollutants emitted by a given source.

AQUIFER — A formation, group of formations, or part of formation that contains enough saturated permeable material to yield significant quantities of water to wells and springs.

ATTAINMENT AREA — A physical, geographical area in which all AAQs are less than the air quality standard.

BURIED-VALLEY AQUIFERS — Sand and gravel deposits within drift-filled valleys and buried glacial drift. These aquifers occur within valleys that were eroded as much as several hundred feet into bedrock prior to and during the Pleistocene ice age.

COAL STUDY AREA (CSA) — An area of land that has sufficient coal development potential and federal coal ownership to identify areas as acceptable for further consideration for coal leasing and possible development of new mine areas and facilities.

COAL WITH DEVELOPMENT POTENTIAL — Coal with overburden of 200 feet or less, a stripping ratio of 20:1 or less, and a seam thickness of 5 feet or greater.

COORDINATED RESOURCE MANAGEMENT PLAN (CRMP) — A CRMP is an activity plan (see above) in which management of all pertinent resources on a site are addressed. CRMPs help ensure that the objectives of different resource programs, e.g., range, wildlife, recreation, archeology, are met in an efficient, coordinated manner.

COTEAU (COTEAU) — A range of hills or an escarpment forming the edge of a plateau. In North Dakota, it refers to the Missouri Coteau that rises in a line generally northwest to southeast along the eastern edge of the Missouri (River) Plateau.

CULTURAL RESOURCES — Fragile and nonrenewable remains of past human activity, occupation, or endeavor as reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture, or natural features.

ENDANGERED SPECIES — Any plant or animal species that is in danger of extinction throughout all or a significant portion of its range, as defined by the USFWS under the authority of the Endangered Species Act of 1973.

FLOODPLAIN — An area adjoining a body of water or stream that has been or may be covered by floodwater.

HABITAT MANAGEMENT PLAN (HMP) — An HMP is an activity plan (see above) that gives the details for management of one or more wildlife species or habitats in a specified geographic area.

INFILTRATION — The flow of a fluid into a substance through pores or small openings; connotes flow into a soil, in contrast with percolation, which connotes flow through a porous substance.

ISSUE — An element or topic of concern, interest or dispute as to its importance or management in a multiple-use approach to public land and its resources.

LAND PATTERN ADJUSTMENT — Repositioning the ownership of land surface and/or mineral estate by exchange, sale, etc.

LAND REPORT — A report substantiating and documenting the environmental effects and decisions of proposed lands and realty actions.

LAND USE PLAN — A comprehensive plan to guide future management of public lands and minerals. Development of land use plans involves an interdisciplinary approach to achieve an appropriate balance of multiple uses.

LEASABLE MINERALS — Minerals such as coal, oil shale, oil and gas, phosphate, potash, sodium, geothermal resources, and all other minerals that may be developed under the Mineral Leasing Act of 1920, as amended.

LOCATABLE MINERALS — Generally the minerals subject to the filing of claims and development specified in the Mining Law of 1872; includes bentonite, uranium.

LONG TERM — Any natural process such as growth or regrowth of vegetation, or development of productive topsoil requiring 20 years or more.

MULTIPLE USE — Management of the various surface and subsurface resources, so that they are utilized in the combination of ways that will best meet the present and future needs of the public, without permanent impairment of the productivity of the land or the quality of the environment.

MULTIPLE USE TRADEOFF — Resource values of concern not covered by the unsuitability criteria which may eliminate additional coal deposits from further consideration for leasing. These tradeoffs protect resource values of a locally important or unique nature not included in the unsuitability criteria.

PALEONTOLOGICAL RESOURCES — The nonrenewable remains of past living organisms.

PREVENTION OF SIGNIFICANT DETERIORATION (PSD) — A planning and management process for allocation and use of air resources. Maximum allowable increases in air quality over baseline concentrations for SO₂ and particulates are set for each area within the state, based upon its classification: Class I, Class II, or Class III. The maximum allowable increases or increments cannot be exceeded by a new source or by a modification to an existing source which emits SO₂ particulates.

RECREATION AND PUBLIC PURPOSES (R & PP) — A lease or patent transferring the use or ownership of public land to a governmental or nonprofit entity for recreational and other public uses.

RIPARIAN AREA — A specialized form of wetland with characteristic vegetation restricted to areas along, adjacent to or contiguous with rivers and streams, also, periodically, flooded lake and reservoir areas, as well as lakes with stable water.

SALEABLE MINERALS — Common varieties of mineral materials such as scoria, sand, stone, and gravel, as well as petrified wood; may be disposed of through free use permits or sales (see Materials Act of 1947, as amended).

SCORIA — In the northwest plains scoria commonly refers to the reddish layers of brick-like masses of baked and fused clay, shale, and sandstone.

SHORT TERM — Any natural process such as growth or regrowth of vegetation requiring up to five years.

SPECIAL STIPULATIONS — These are conditions or requirements attached to a lease or contract that apply in addition to standard stipulations (see below). They frequently provide additional protection of the environment from resource developments, e.g., coal mining, oil and gas development. Special stipulations become effective by their specification on a RMP.

STANDARD STIPULATIONS — These are conditions or requirements attached to a lease or contract that detail specific actions to be taken or avoided during resource development, e.g., coal mining, oil and gas development. They usually provide basic protection of the environment.

THREATENED SPECIES — Any plant or animal species that is likely to become an endangered species throughout all or a significant portion of its range, as defined by the USFWS under the authority of the Endangered Species Act of 1973.

TOTAL DISSOLVED SOLIDS (TDS) — The dry weight of dissolved material, organic and inorganic, contained in water or waste. Dissolved solids cannot be removed by filtration, and excessive dissolved solids makes water unpalatable for drinking and unsuitable for industrial use. Generally reported in mg/l.

UNSUITABILITY CRITERIA — The 20 criteria described at 43 CFR 3461.1, the application of which results in an assessment of federal coal lands as suitable or unsuitable for all or certain methods of surface coal mining.

WILDLIFE THRESHOLD — This is a leaseable acreage of wildlife habitat beyond which no further leasing will be allowed without a joint review of the situation by BLM, USFWS, and NDGFD. Thresholds are calculated for each CSA individually. Acreages above the threshold are preliminarily excluded from further consideration for coal leasing under the multiple-use tradeoff screen.

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APPENDICES

APPENDIX A

COAL PLANNING AND ACTIVITY PLANNING

APPENDIX A-1 — FEDERAL COAL PLANNING PROCESS

The development of federal coal is a tiered process. As the size of the area of consideration is reduced, the amount of data and depth of analysis is intensified. Through this process, attention and detailed analysis becomes focused on those coal tracts most likely to be mined.

Prior to leasing federal coal, the BLM completes two levels of planning:

1. Land Use Planning, where coal deposits acceptable for further consideration are identified.
2. Activity Planning, where specific coal tracts are delineated for leasing.

After a tract has been leased, NDPSC, in concert with OSMRE, analyzes a site-specific mining and reclamation plan, requires bonding and monitors the mining operation. **The BLM is also involved in the approval of Resource Recovery and Protection Plans, setting of performance bonds, monitoring of coal production, and inspection of reclamation.**

A description of the two planning processes undertaken by BLM prior to actual leasing or lease offering is provided below. Detailed descriptions are presented in the Final EIS Supplement, Federal Coal Management Program (USDI 1985) and in the federal coal management regulations presented in 43 CFR 3400. A flow chart depicting the general coal planning process is provided at the end of this appendix.

Land Use Planning

During land use planning federal coal is analyzed for development potential and the presence of unacceptable environmental tradeoffs using four broad screens (43 CFR 3420.1-4):

- (1) coal development potential,
- (2) unsuitability criteria,
- (3) multiple-use tradeoffs, and
- (4) surface owner opposition.

The four screens are generally applied to federal coal within the planning area in the order presented unless it is obvious that later screens will apply. Each of the screens is discussed in detail in **Appendix B**.

The major land use planning decision concerning coal is the identification of areas acceptable for further consideration for leasing. The four coal screens constitute the framework used to identify areas obviously not suited to coal mining. Application of the four screens early in the overall coal planning process eliminates most potential environmental conflicts, allows coordination of management concerns and objectives between agencies and publics, and serves to focus future coal management on those areas best suited to mining. In addition to the finding of coal acceptable for further consideration, land use plan-

ning includes the identification of data inadequacies, and suggested mitigation or lease stipulations.

Adoption of a RMP by the BLM constitutes a major federal action and requires the preparation of an EIS. Coal-related portions of the alternatives of the EIS are generally based on variations in the application of the multiple-use tradeoff screen. The land use plan and related NEPA documentation ensure opportunities for public input and coordination with state and federal resource management agencies.

APPENDIX A-2 — ACTIVITY PLANNING

Coal

Activity planning provides the opportunity to review specific proposed lease areas in a detailed manner. The aerial scope of activity planning is much smaller than that of land use planning.

Activity planning involves the analysis of many of the same environmental factors as considered during land use planning but on a site-specific basis. Detailed inventories and analyses are conducted, as necessary to allow refinement and implementation of land use plan decisions. Activity planning allows the application of mitigation measures or stipulations prescribed in the land use plan to specific locations such as archaeological sites or wildlife habitats.

Activity planning provides the opportunity to re-visit areas initially affected by the unsuitability criteria under general land use planning. Adjustments may need to be made when areas are looked at on the detailed scale provided under activity planning. Application of site-specific exceptions to the unsuitability criteria can be made during activity planning if the conditions of the exceptions listed in 43 CFR 3461.1 are met.

Lands affected by other coal screens can also be more closely analyzed during activity planning. If the original purpose for exclusion of an area under one of the screens no longer exists, and there are no overlaps with other screens, the once affected area can be included for activity planning.

Activity planning also includes NEPA compliance, often in the form of an EIS. This analysis may include an assessment of expected cumulative environmental impacts in addition to site-specific analyses. The NEPA process also ensures opportunity for public input and coordination with state and federal resource management agencies.

Other Resources

The RMP is not a final implementation decision on actions which require further specific plans, process steps, or decisions. The actions requiring activity plans are referenced in Chapter Two of this docu-

FIGURE A-1
FLOW CHART OF FEDERAL COAL
PLANNING PROCESS

(Required BLM land use planning steps are presented
in bold type)

Land Use Planning	Activity Planning
— Notice of Intent to Prepare RMP	— Delineate Tracts or Receive Lease Applications
— Call for Coal Resource Information	
— Identify Issues	— Ensure Consistency with RMP
— Initiate Assessments of: Development Potential Unsuitability Multiple-Use Tradeoffs	— Consult With or Notify Governor and Others as Appropriate
— Develop Planning Criteria	— Conduct Necessary Inventories
— Analyze Management Situation	— Modify Tract Boundary if Necessary
— Conduct Necessary Inventory	
— Complete Preliminary Assessments of: Development Potential Unsuitability Multiple-Use Tradeoffs	— Prepare Site Specific Analysis (NEPA Documentation) — Prepare Regional Analysis (NEPA Documentation) if Necessary
— Consult With Surface Owners	— Consult with Governor and Others as Appropriate
— Formulate Alternatives	
— Estimate Effects of Alternatives	— BEGIN LEASE SALE PROCEDURES
— Complete and Document Results of Surface Owner Consultation	
— Select Preferred Alternative and Publish Draft Plan and EIS	
— Select RMP and Publish Proposed Plan and EIS	
— Hold Public Hearing if Requested	
— Issue Record of Decision	
— Identify Areas Acceptable for Further Consideration for Leasing or Exchange	

ment. Activity plans will be written for specific resources and areas and will clearly establish objectives, actions to be taken, timeframes, equipment, work force, projected budget requirements and monitoring needs. Clear objectives and goals, crucial to multi-resource plans, will provide direction for management while providing flexibility. Management prescriptions will be closely tied to plan objectives. Activity plans must be cost effective. Detailed inventories and analyses will be conducted as necessary to allow refinement and implementation of land use plan decisions. Activity planning allows the application of mitigation measures or stipulations prescribed in the land use plan.

Besides involving various levels of management intensity, activity plans may involve more than one resource, e.g., range, watershed, and wildlife, in Coordinated Resource Management Plans. Coordinated Resource Management Plans are generally preferred over single resource activity plans. Coordinated Resource Management Plans establish overall objectives and goals for all resources considered. Where possible, BLM activity plans will be coordinated with and tied to other federal and state agency plans (e.g., SCS ranch plans) as well as related private operating plans for adjacent lands. Activity planning includes NEPA compliance which also provides opportunity for public input and comment as well as coordination with state and federal agencies.

The general objectives of activity plans are based on resource objectives established in the land use plan. These objectives are refined and developed to accommodate more site-specific resource considerations.

Activity plans establish timeframes for development and implementation of the actions to be taken and present an analysis of expected results. Benefit-cost analysis is conducted during development of the activity plan. Implementation is prioritized to allow more accurate budget projections.

Activity plans also establish resource monitoring requirements and procedures to be used to assess progress towards the objectives and goals; helping to identify necessary revisions or adjustments in management prescriptions. When monitoring indicates management actions are not achieving the resource objectives, the management actions will be adjusted while staying within the framework of the land use plan. Monitoring also provides an opportunity to assess the appropriateness of the original resource objectives.

APPENDIX B

APPLICATION OF THE FOUR COAL LAND USE PLANNING SCREENS

APPENDIX B-1 — IDENTIFICATION OF AREAS WITH COAL DEVELOPMENT POTENTIAL

Identification of areas with coal development potential is the first of the four land use planning screens for federal coal (43 CFR 3420.1-4). In applying this screen, the BLM utilized coal information collected by federal agencies in addition to data provided by industry, state and local governments, and the general public. **This includes an estimated 6,000 publicly available geophysical logs of coal test holes and water wells plus an additional 2,000 logs provided by industry.** A public call for coal resource information was made in conjunction with the Notice of Interest for the Initiation of a Planning Activity (Federal Register, Vol. 49, No. 245; Dec. 19, 1984).

The BLM Branch of Solid Minerals, MSO, evaluated federal coal in North Dakota to determine areas with **high or moderate** development potential. **This was done using the above mentioned drilling data and over 70 years of published and unpublished mapping data and reports.** The most current of these are listed under Literature Cited, Coal Data References.

Criteria for determination are:

- (1) Maximum 20:1 stripping ratio,
- (2) Maximum 200 feet overburden,
- (3) Coal at least five feet thick, and
- (4) Minimum 5,000 Btu/lb as received heating value.

These criteria define the North Dakota lignite considered to have high or moderate potential for development in the next few decades. Coal not meeting these standards has low potential. The criteria values reflect the extremes of present and planned coal recovery in North Dakota.

For the purpose of the RMP screening, legal subdivisions were used to describe acreages rather than free-flowing, and somewhat smaller, actual boundaries of the known coal resources. Tonnage figures used in the RMP were estimated by multiplying the acres of known coal with development potential by the minable seam thickness and average tons per acre-foot.

Table B-1 gives the estimated tonnages for each of the study areas as well as some of the coal characteristics for each area.

TABLE B-1
COAL CHARACTERISTICS OF COAL STUDY AREAS

Coal Study Area	Tons of Coal With Development Potential (Millions)	Coal Beds in Descending Order	Bed Thickness (Feet)	Overburden/ Interburden to Bed Above (Feet)
Antelope	2,043	Beulah-Zap	15	0 - 200
Arnegard	348	Horse Creek	2.0 - 7.0	0 - 200
		HT Butte	2.5 - 17.9	67
Beulah-Zap	1,350	Beulah-Zap	11	0 - 200
		School House	8	
Bowman-Gascoyne	5,960	Harmon	8 - 31	0 - 200
		Hansen	5 - 15	30
Center-Stanton	1,086	Stanton	5 - 16	0 - 200
		Berg	3 - 8	
		Yeager	3 - 7	
		Upper Hagel	5 - 8	
		Lower Hagel	7 - 14	3 - 50
Dickinson	14,192	Dickinson	0 - 10	0 - 200
		Lehigh	0 - 5	30
		Heart River	0 - 29	50
		Fryburg	0 - 20	50
Divide	802	Noonan	7 - 10	0 - 200
		Unnamed	3 - 12	60
Dunn Center	5,126	C	1 - 10.5	0 - 180
		B	2 - 10.5	6 - 72
		A	0 - 8.5	31 - 113
		Dunn Center	7 - 26	2 - 124
Elgin-New Leipzig	721	Harmon	8	0 - 200
		Hansen	4	60
Elkhorn	258	Unnamed	5	0 - 200
Fortuna	674	Unnamed	7 - 22	30 - 200
		Unnamed	3 - 5	100
Garrison	1,852	Minter-Zone	1 - 15	0 - 100
		Garrison Creek		
		Zone	1.5 - 24	53 - 104
		Coteau	17 - 19	30
Golden Valley	1,096	Harmon	3 - 37	0 - 200
		Hansen	1 - 15	15 - 122
Hanks	2,476	Hanks	2 - 18	0 - 200
		Grenora	2 - 10	20 - 80
Keene	1,633	Keene	1.2 - 10.0	0 - 200
		Williston	3.0 - 13.4	3 - 110
Mott	1,346	Heart River	6.7	35 - 110
		Fryburg	7.4	35 - 110
		HT Butte	6	30 - 145
		Coal Bank Creek	7	3 - 100
		Garner Creek		
		(2 benches)	10	40 - 120
		Nomad	0 - 12	50 - 130
		Harmon	10	22 - 166
		Hansen	10	13 - 100
New England	4,947	Lehigh	6.7	0 - 200
Niobe	142	Bonus	5 - 11.5	36 - 103
		Niobe	3 - 8	36
Sand Creek	2,097	Williston	2 - 10	0 - 200
		Avoca	0 - 10	40
Tobacco Garden	650	Green	3 - 6	0 - 200
		Blue	4 - 12	80 - 140
		Yellow	4 - 10	50
Underwood, Washburn	345	Underwood	5 - 13	0 - 180
Velva	1,852	Coteau	16	0 - 200
Williston	2,777	Mormon	5.9 - 13.1	0 - 200
		Williston	3.9 - 12.1	210
		Avoca	0 - 12.1	39
		Pittsley	3.0 - 15.7	217

APPENDIX B-2 — UNSUITABILITY CRITERIA

Application of the unsuitability criteria was largely carried out between August 1985 and July 1986. The following is a summary of results obtained by application of each unsuitability criterion along with corresponding exceptions and exemptions. All exemptions were considered at the time of application of each unsuitability criteria to the CSAs. Specific exceptions were applied when it was possible. Certain exceptions will be applied after site-specific information is obtained during mine activity planning and/or lease application. After application of site-specific exceptions unsuitability designations may change.

In general, criteria 1, 2, 3 and 6 refer to land status; criteria 4, 5, and 8 refer to recreational and natural values; criterion 7 refers to cultural resources; criteria 9 through 15 refer to wildlife; criteria 16 through 19 refer to watershed; and criterion 20 refers to issues proposed by the State. Complete definitions of each of the criteria are provided in 43 CFR 3461.1. Acres dropped from further consideration due to coal unsuitability criteria in Alternative A are summarized in Table B-2. The summary for Alternative B, C, and D is presented in Table B-3. The following discussion applies to Alternatives B, C, and D.

Criterion 1 — Federal Land System

Tracts totalling 13,939 acres were identified within the CSAs as unsuitable without exception. These lands included wetland easements, wildlife refuges, waterfowl production areas, and incorporated cities and towns.

Criterion 2 — Rights-of-Way Easements

No areas were identified as unsuitable under this criterion.

Criterion 3 — Buffer Zones along Road Rights-of-Way and Adjacent to Communities, Public Schools, Occupied Dwellings, Churches, Public Parks, and Cemeteries.

A total of 43,383 acres of road rights-of-way and buffers; lands under occupied dwellings; and areas containing cemeteries, schools, churches, parks, communities, or institutional buildings was identified as unsuitable for mining. It is expected that the exception to this criterion would often apply. Application of the exception requires site-specific data and, in some cases, additional public input.

Criterion 4 — Wilderness Study Areas

There are no wilderness study areas located within the CSAs.

Criterion 5 — Scenic Areas

No areas were identified as unsuitable under this criterion. There are no Class I visual quality lands identified within the CSAs.

TABLE B-2
ALTERNATIVE A
ACRES EXCLUDED FROM FURTHER CONSIDERATION DUE TO COAL UNSUITABILITY CRITERIA

CSA	UNSUITABILITY CRITERIA									Gross Total ²	Net Total ³
	1	3	7 ¹	11	13	14	15	16	19		
Antelope	0	1,217	0	0	0	0	0	0	0	1,217	1,217
Arnegard	0	0	0	0	0	0	0	0	0	0	0
Beulah-Zap	0	851	0	0	0	0	0	100	0	951	943
Bowman-Gascoyne	320	0	0	0	0	0	0	0	0	320	320
Center-Stanton	0	1,060	0	0	0	0	140	0	0	1,200	1,200
Dickinson	0	5,511	0	0	0	0	0	1,215	26,130	32,856	26,469
Dunn Center	0	2,187	2,897	0	0	0	0	560	14,342	19,986	14,342
Elgin-New Leipzig	0	0	0	0	0	0	0	160	1,240	1,400	1,400
Garrison	1,351	640	0	0	0	0	0	0	0	1,991	1,991
Golden Valley	0	182	10	0	0	0	0	109	0	301	291
Hanks	560	0	0	0	0	1,701	0	0	0	2,261	2,261
Mott	0	0	0	0	0	790	0	0	0	790	790
New England	0	0	0	0	0	0	0	1,560	18,280	19,840	18,280
Sand Creek	200	0	0	0	0	0	0	0	0	200	200
Tobacco Garden	0	0	0	945	0	0	17,294	0	10,240	28,479	25,892
Underwood	280	132	0	0	0	0	0	0	0	412	400
Washburn	0	52	0	0	0	0	0	0	0	52	52
Williston	40	0	0	5,200	0	0	50,270	0	18,160	73,670	55,510
TOTAL	2,751	11,832	2,907	6,145	0	2,491	67,704	3,704	88,392	185,926	151,568

¹Would no longer apply due to a 1983 regulation change.

²No consideration given to overlap among unsuitability criteria.

³Overlap among unsuitability criteria subtracted from gross total.

TABLE B-3
ALTERNATIVES B, C, D
ACRES EXCLUDED FROM FURTHER CONSIDERATION DUE TO COAL UNSUITABILITY CRITERIA

CSA	UNSUITABILITY CRITERION									Gross Total ²	Net Total ³
	1	3 ¹	7	11	13	14	15	16	19		
Antelope	40	1,156	0	0	0	25	0	444	571	1,080	910
Arnegard	0	296	0	0	0	0	0	105	0	105	105
Beulah-Zap	0	468	0	0	0	913	8,979	600	1,801	12,293	10,274
Bowman-Gascoyne	320	368	0	0	0	0	0	189	0	509	231
Center-Stanton	0	664	0	0	0	0	0	226	1,018	1,244	1,197
Dickinson	40	2,411	0	1,057	0	1,024	0	3,939	2,984	9,044	6,842
Divide	347	66	0	0	0	37	0	80	80	544	461
Dunn Center	285	1,472	0	0	0	695	0	3,897	3,489	8,366	5,196
Elgin-New Leipzig	0	287	0	0	0	0	0	201	167	368	325
Elkhorn	0	460	0	310	0	0	0	0	0	310	267
Fortuna	4,690	412	0	0	0	3,908	0	0	0	8,598	8,539
Garrison	1,960	452	0	0	0	1,874	0	569	753	5,156	4,067
Golden Valley	640	745	0	0	0	0	0	211	211	1,062	850
Hanks	95	4,337	0	0	0	1,701	0	436	1,144	3,376	2,917
Keene	0	2,323	0	702	98	900	11,805	516	1,549	15,570	14,600
Mott	0	2,340	0	0	0	790	0	9	0	799	806
New England	0	10,700	0	0	0	0	0	2,225	5,533	7,758	5,569
Niobe	0	11	0	0	0	0	0	0	0	0	0
Sand Creek	60	4,261	0	0	0	0	0	943	1,320	2,323	1,761
Tobacco Garden	0	1,242	0	8,970	0	0	36,711	384	5,440	51,505	50,385
Underwood	303	79	0	0	0	657	0	0	0	960	995
Velva	5,159	644	0	0	0	11,419	0	0	0	16,578	16,122
Washburn	0	29	0	0	0	0	0	100	17	117	85
Williston	0	8,160	0	5,200	0	0	50,270	441	5,932	61,843	60,878
TOTAL	13,939	43,383	0	16,239	98	23,943	107,765	15,515	32,009	209,508	193,382

¹Criterion 3 acreages not included in gross or net totals because overlap with other criteria is unknown.

²No consideration given to overlap among unsuitability criteria.

³Overlap among unsuitability criteria subtracted from gross total.

Criterion 6 — Land Used for Scientific Study

No areas were identified as unsuitable under this criterion.

Criterion 7 — Historic Lands and Sites

No areas were identified as unsuitable under this criterion. There are no places within the CSAs which are listed on the NRHP.

Criterion 8 — Natural Areas

There are no designated natural areas or National Natural Landmarks within the CSAs.

Criterion 9 — Federally Designated Critical Habitat For Threatened and Endangered Species

No areas were identified as unsuitable under this criterion.

Criterion 10 — State Listed Endangered Species

No areas were identified as unsuitable under this criterion. There are no state-listed endangered species.

Criterion 11 — Bald and Golden Eagle Nest Sites

Twenty-one golden eagle nests and buffer zones, totalling 16,239 acres, were identified as unsuitable. No bald eagle nest sites are known within the CSAs.

Criterion 12 — Bald and Golden Eagle Roost and Concentration Areas

No areas were identified as unsuitable under this criterion. There are no Bald and Golden Eagle roost and concentration areas within the CSAs.

Criterion 13 — Falcon Cliff Nesting Sites

One prairie falcon cliff nest site and appropriate buffer zone, totalling 98 acres, was identified in conjunction with USFWS as unsuitable under this criterion. No other falcon cliff nest sites have been identified within the CSAs.

Criterion 14 — Migratory Birds of High Federal Interest

High priority habitat and appropriate buffer zones for ferruginous hawks and canvasbacks, totalling 23,943 acres, were identified in conjunction with the USFWS.

Criterion 15 — State Resident Fish and Wildlife

A total of 107,765 acres of essential habitat for species of high interest to the State of North Dakota were identified as unsuitable. The habitat consisted mainly of year-round and winter ranges for big game populations.

Criterion 16 — Floodplains

Criterion 16 applied to 15,515 acres of floodplains on which mining would pose a substantial threat of loss of life or property. Only the floodplains of major streams and tributaries were deleted. Floodplains of lesser streams were not deleted because mining was not identified as posing a substantial threat of loss of life or property.

Criterion 17 — Municipal Watersheds

No areas were identified as unsuitable under this criterion. There have been no municipal watersheds designated by the Surface Management Agency within the CSAs.

Criterion 18 — Natural Resource Waters

No areas were identified as unsuitable under this criterion. There are no natural resource waters within the CSAs.

Criterion 19 — Alluvial Valley Floors

A total of 32,009 acres within the CSAs were identified as preliminary AVFs based on geologic maps, color infrared air photo interpretation, and comparison with 1:100,000 scale reconnaissance maps of AVFs in West-Central North Dakota, prepared in 1983 for the Office of Surface Mining. These areas have been included in all figures, maps, and tables as unsuitable within the CSA.

Criterion 20 — State Proposed Criteria

The State of North Dakota has proposed no unsuitability criteria.

APPENDIX B-3 MULTIPLE-USE TRADEOFFS

This appendix has been substantially rewritten from the draft RMP/EIS to provide more detail on the multiple-use tradeoffs considered. However, the only acreage changes involve the Dunn Center and Golden Valley CSAs in Alternatives B, C, and D. In the draft RMP 1520 acres (34.56 MM tons of coal) in the Dunn Center CSA were excluded under "Oil and Gas Fields" and 160 acres (5.32 MM tons of coal) in the Golden Valley CSA were excluded under "Cultural Resources." These acreages have not been excluded in this document and are available for further consideration.

Coal planning regulation 43 CFR 3420.1-4e(3) states that "multiple land use decisions shall be made which may eliminate additional coal deposits from further consideration for leasing, to protect resource values of a locally important or unique nature not included in the unsuitability criteria."

Methods

Transparent overlays for each of the factors listed below were delineated on 1:100,000 scale base maps for each of the 24 CSAs. The presence of any one multiple-use conflict was sufficient to exclude an area from further consideration for coal leasing. These overlays are available for review in the Dickinson District BLM office.

Factors in Analysis

For Alternative A, explanations for application of the multiple-use tradeoff screen can be found in the McKenzie-Williams, West-Central, Southwest, and Golden Valley MFPs.

For Alternatives B, C, and D, seventeen factors were identified that would result in acreages being excluded from further consideration for coal leasing or exchange. Below is a detailed account of the definition of each tradeoff, the rationale for applying it, the acreages of federal coal affected, and the coal tonnages affected. These are gross totals. They include all acreages and tonnages affected by the tradeoff and do not take into account overlap among tradeoffs. Overlap is taken into account in Tables B-6 through B-8 of this appendix under the heading "Net Total". If no alternative is specified, the tradeoff applies equally to Alternatives B, C, and D.

Summary data of the gross and net multiple-use tradeoff acreages by CSAs are located in Tables B-4 through B-8 of this appendix. These tables correspond with Tables D-1 through D-5 of the draft RMP/EIS with the following exceptions. Items A through I (below) were combined under the category "High Use, Utility, Trans." in the draft RMP. Item J was placed under category "Intensive Use Buffer". Items K and L were combined under "Cultural Resources".

A. COMMUNITIES HAVING 1980 POPULATIONS LESS THAN 500 PERSONS.

Definition — A buffer area 1/4 miles wide from the edge of communities with populations less than 500 persons, based on the 1980 census, would be excluded from further consideration for coal leasing.

Rationale — Small communities enjoy a quality of life free from offensive noise, dust, and visual intrusions. A buffer is necessary to protect that quality.

Effects of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Bowman-Gascoyne	520	35.67
Dickinson	80	1.68
Dunn Center	240	6.72
Fortuna	480	10.67
Hanks	345	6.04
Keene	40	1.05
New England	40	1.61
Velva	160	1.68
Williston	40	0.49
TOTAL	1945	65.61

B. COMMUNITIES HAVING 1980 POPULATIONS GREATER THAN 500 PERSONS.

Definition — A buffer area 1/2 mile wide from the edge of communities with populations great-

er than 500 persons, based on the 1980 census, would be excluded from further consideration for coal leasing.

Rationale — Larger communities enjoy a quality of life free from offensive dust, noise, and visual intrusions. They also require space for community expansion and dispersed recreational activities. A buffer is needed to protect the quality of life and ensure that adequate space will be available adjacent to the community.

Effects of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Antelope	640	7.84
Center-Stanton	160	2.52
Dickinson	160	4.48
Dunn Center	325	5.69
Golden Valley	200	9.80
New England	240	6.30
Sand Creek	200	4.20
TOTAL	1925	40.83

C. RESIDENTIAL SUBDIVISION

Definition — Areas occupied by, or platted for, residential subdivisions would be excluded from further consideration for coal leasing.

Rationale — Substantial investments have been made to develop subdivisions and construct homes. Subdivisions often provide housing opportunities that attract people and thus are important to local economies. It is necessary to protect these investments and housing opportunities.

Effects of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Dickinson	80	2.73
Dunn Center	480	8.40
Sand Creek	920	9.66
Williston	560	19.60
TOTAL	2040	40.39

D. INDUSTRIAL CONCENTRATIONS

Definition — Areas occupied by or adjacent to industrial concentrations; e.g., warehouse complexes, manufacturing areas, industrial parks, would be excluded from further consideration for coal leasing.

Rationale — Considerable monetary investments have been made to develop areas for industrial use. They also provide logical locations for future industrial growth. It is necessary to protect these investments and future opportunities.

Effects of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Beulah-Zap	60	0.00
Center-Stanton	614	0.19
Dickinson	1120	38.22
Sand Creek	360	6.30
TOTAL	2154	44.71

E. MINUTEMAN MISSILE SILOS

Definition — A buffer area with a 2½-mile radius from each MINUTEMAN missile silo would be excluded from further consideration for coal leasing.

Rationale — The MINUTEMAN missile system is an integral part of the nation's defense system. A study conducted by the U.S. Air Force (1984) determined coal mining could interfere with the launch capabilities of the missiles. A buffer zone of a 2½-mile radius is necessary to protect their operational integrity.

Effects of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Garrison	8,560	190.25
Velva	2,680	37.52
TOTAL	11,240	227.77

F. MINUTEMAN COMMUNICATION CABLES

Definition — A corridor 100 feet wide on each side of MINUTEMAN communication cables would be excluded from further consideration for coal leasing.

Rationale — The MINUTEMAN communication system is an integral part of the nation's defense system. A study conducted by the USAF (1984) determined coal mining could interfere with operation of the missile communication system. A buffer of 100 feet on each side of the cables is necessary to protect their operational integrity.

Effects of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Garrison	36	0.80
Velva	230	3.22
TOTAL	266	4.02

G. ELECTRIC TRANSMISSION LINES EQUAL TO OR GREATER THAN 230 KV.

Definition — A corridor 50 feet wide on each side of electric transmission lines equal to or greater

than 230 KV would be excluded from further consideration for coal leasing.

Rationale — Substantial investments are made to construct the larger electric transmission lines. Lines equal to or greater than 230 KV generally require construction of towers whereas smaller lines do not. Large populations depend on continuous operation of each part of the electric grid. A buffer is necessary to protect both the investments and the supply of electrical power.

Effects of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Antelope	63	0.89
Beulah-Zap	115	1.21
Bowman-Gascoyne	6	0.41
Center-Stanton	105	1.65
Dickinson	60	2.05
Divide	3	0.04
Dunn Center	96	2.18
Golden Valley	3	0.15
Underwood	6	0.08
Washburn	12	0.14
TOTAL	469	8.82

H. PIPELINES EQUAL TO OR GREATER THAN 12 INCHES IN DIAMETER.

Definition — A corridor 50 feet wide on each side of pipelines equal to or greater than 12 inches in diameter would be excluded from further consideration for coal leasing.

Rationale — Substantial investments are made to construct larger pipelines. The 12 inch diameter generally separates the larger transmission lines from smaller distribution lines. A buffer is needed to protect these investments and avoid disruption in pipeline operation.

Effects of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Antelope	15	0.21
Arnegard	75	0.72
Beulah-Zap	76	0.80
Center-Stanton	42	0.37
Dickinson	30	0.53
Dunn Center	60	1.05
Elkhorn	63	0.55
Keene	221	2.20
Velva	9	0.13
Williston	69	0.97
TOTAL	660	7.52

I. OPERATING RAILROADS

Definition — A corridor 50 feet wide on each side of operating railroads would be excluded from further consideration for coal leasing.

Rationale — Substantial investments are made to construct railroads, and because of grade (steepness) restrictions, desirable railroad routes are not easily obtained. Also, the most direct routes between population centers or facilities and main-line tracks are desirable. It is necessary to protect the investment in, and integrity of, the system.

Effects of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Bowman-Gascoyne	33	2.26
Dickinson	18	0.41
Dunn Center	93	2.12
Fortuna	42	0.93
Garrison	6	0.06
Golden Valley	9	0.41
Hanks	54	0.00
Underwood	9	0.17
Velva	21	0.22
Williston	24	0.42
TOTAL	309	7.01

J. AGRICULTURAL EXPERIMENT STATION

Definition — A buffer area 1/2 mile from the edge of the agricultural experiment station would be excluded from further consideration for coal leasing.

Rationale — Research projects at the facility are sensitive to small changes in environmental conditions. Coal mining within 1/2 mile could disrupt research by changing microclimate, fugitive dust, or other conditions. It is necessary to protect the integrity of baseline data collection and ongoing research projects.

Effect of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Sand Creek	440	6.16
TOTAL	440	6.16

K. ELIGIBLE KNIFE RIVER FLINT QUARRY DISTRICT

Definition — All federal coal within the boundary of the Knife River Flint Quarry National Register District would be excluded from further consideration for coal leasing.

Rationale — The cultural resources within the subject district are of national significance. There are at least 54 sites within the district. Most of these sites are large and complicated exhibiting multicomponent and multifunctional characteristics. Because these sites are nationally significant and contextually complex — preservation is the only suitable treatment.

Effect of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Dunn Center	3761	94.74
TOTAL	3761	94.74

L. WRITING ROCK HISTORIC SITE

Definition — A buffer area of 40 acres around and including the Writing Rock Historic Site would be excluded from further consideration for coal leasing.

Rationale — Writing Rock Historic Site is one of the few Late Prehistoric Rock Art sites in North Dakota. It is also a developed recreational site. It is necessary to protect the cultural resources and preserve a positive recreational experience for visitors to the site.

Effect of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Fortuna	40	0.89
TOTAL	40	0.89

M. KEY WILDLIFE HABITATS

Definition — Wooded draws, wooded shrublands, and riparian habitats greater than approximately 40 acres in extent were placed in a category called Wildlife Threshold Acres. A certain percent of these habitats, depending on the CSA (Table B-4), would be conditionally excluded from further consideration for coal leasing. If all the wildlife threshold acreage available for leasing within a CSA were leased, no further leasing would be allowed without a joint review of current leasing, mining, and reclamation in the CSA by BLM, NDGFD, and USFWS.

Rationale — Large, contiguous wooded draw, wooded shrubland, and riparian habitats provide essential cover, food, and nest sites for many more game and non-game species than other habitats in the planning area. Many of these areas did not qualify as unsuitable under strict interpretation of the Unsuitability Criteria. Further, full reclamation of these habitats has not been successfully accomplished. Therefore, it is necessary to protect a percentage of these habitats sufficient to maintain regional populations of key game, sensitive, and non-game wildlife species. The vegetative reclamation stipulation for threshold acres that are mined would be that an acreage equivalent to that disturbed be reclaimed to approximately its former condition (e.g., species diversity, production, canopy cover).

Procedure — After the wildlife Unsuitability Criteria (Criteria 9-15) were applied in each

CSA, other key wildlife habitats, as described above, were identified from 1:24,000 color infrared aerial photographs and vegetation maps. These acreages comprise the Original Threshold Acres (Table B-4).

A judgment was then made as to what percentage of these acreages would be allowed to go forward for further consideration for coal leasing without significantly impacting wildlife populations described above. BLM, NDGFD, and USFWS agreed that it was not necessary to protect specific geographic portions of these habitats but only to protect an adequate amount somewhere in the CSA. The judgment of percentage to go forward for further consideration for leasing was based on: (1) the acreages of different habitats in the CSA, (2) the acreages of different habitats on lands surrounding the CSA, (3) known populations of key species, as described above, and (4) current leasing and mining patterns in the CSA.

Once these acreages were delineated, it was necessary to determine what portions were already protected under other (non-wildlife) Unsuitability Criteria, surface owner consultation, or other multiple-use tradeoffs. The Original Threshold acreages less the acreage excluded for other considerations are listed by alternative and by CSA in Table B-4 as Remaining Threshold Acres.

Effects of Tradeoff

See Table B-4.

N. STEEP SLOPES

Definition (Alternative C) — Concentration of slopes (generally areas or parts of areas of 40 acres or more) greater than 30 percent would be excluded from further consideration for coal leasing.

Rationale — The BLM, NDPSC, and coal industry agree that terrain with concentrations of slopes exceeding 30 percent is difficult to reclaim to approximate original contour (see McKenzie-Williams MFP, Summary Decision Document [BLM 1984]). Such lands are highly susceptible to excessive erosion after being disturbed. In addition, steep slopes often have relatively high aesthetic interest. Although less steep slopes may also present problems to surface coal mining and reclamation, industry has demonstrated their ability to deal with them. Hilly areas with slopes less than 30 percent would be dealt with on a case-by-case basis during activity planning. Areas with complex slope patterns may be excluded from mining while those with long, simple slopes may be acceptable.

Effects of Tradeoff (Alternative C)

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Antelope	2,264	32.09
Arnegard	46	0.44
Beulah-Zap	3,952	41.50
Center-Stanton	374	3.27
Dickinson	894	20.34
Dunn Center	1,995	45.39
Elgin-New Leipzig	220	3.47
Elkhorn	1,802	15.77
Hanks	2,597	49.99
Keene	3,866	38.56
Mott	433	4.17
New England	981	6.87
Sand Creek	1,379	16.65
Tobacco Garden	22,597	316.36
Velva	100	2.10
Washburn	227	2.62
Williston	35,751	538.05
TOTAL	79,478	1137.63

Definition (Alternative D) — Slopes greater than 15 percent would be excluded from further consideration for coal leasing.

Rationale (Alternative D) — On areas with complex topography, terrain with slopes greater than 15 percent can be difficult to reclaim. Such lands may be susceptible to excessive erosion after being disturbed. Exclusion of lands with slopes greater than 15 percent will ensure that most all hilly and steep areas susceptible to excessive erosion are protected.

Effects of Tradeoff (Alternative D)

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Antelope	9,806	139.00
Arnegard	1,499	14.43
Beulah-Zap	24,362	255.80
Bowman-Gascoyne	846	58.04
Center-Stanton	4,667	40.84
Dickinson	7,862	178.86
Dunn Center	8,410	191.33
Elgin-New Leipzig	717	11.29
Elkhorn	8,574	75.02
Fortuna	1,091	24.25
Garrison	2,703	47.30
Golden Valley	136	2.09
Hanks	9,137	175.89
Keene	39,097	389.99
Mott	4,808	46.28
New England	2,281	39.92
Sand Creek	8,577	103.57
Tobacco Garden	38,095	533.33
Underwood	497	6.96
Velva	4,162	87.40
Washburn	709	8.19
Williston	66,951	1007.61
TOTAL	244,987	3437.38

O. KEY OIL AND GAS FIELDS

Definition — Major oil and gas fields, as delineated by the North Dakota Industrial Commission based on production, likelihood of future production, and expected life, would be excluded from further consideration for coal leasing.

Rationale — Substantial investments in exploration and development have been made in major oil and gas fields. Coal leasing could interfere with the continued production of these fields. After oil and gas production has been completed, the coal resources of the field would still be available for future leasing.

Effects of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Arnegard	920	8.86
Dickinson	9,400	320.78
Fortuna	2,400	53.34
Golden Valley	480	7.39
Keene	46,280	809.90
Sand Creek	3,840	73.92
Williston	13,200	198.66
TOTAL	76,520	1472.84

P. BURIED-VALLEY AQUIFERS

Definition (Alternative D) — Buried-valley aquifers would be excluded from further consideration for coal leasing.

Rationale (Alternative D) — Buried-valley aquifers generally contain water of high quality, have relatively high flows, and are at a shallow depth. The ground water in them may be suitable for domestic and/or irrigation purposes. It is necessary to protect these water sources from being eliminated by coal mining. Procedures of the NDPSC usually provide this protection. However, by excluding all buried-valley aquifers from further consideration for coal leasing, the integrity of these water sources is ensured.

Effects of Tradeoff (Alternative D)

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Antelope	917	1.42
Arnegard	1,107	2.41
Beulah-Zap	1,825	3.15
Center-Stanton	1,004	0.00
Divide	49	0.00
Dunn Center	2,635	29.58
Elgin-New Leipzig	200	3.15
Elkhorn	64	0.56
Fortuna	5,903	44.45
Garrison	50	0.00
Hanks	562	0.00
Keene	7,495	29.93

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Sand Creek	878	7.00
Tobacco Garden	4,659	12.25
Underwood	114	0.00
Velva	1,037	25.41
Williston	3,774	15.05
TOTAL	32,273	174.34

Q. CITY OF DICKINSON MUNICIPAL WATERSHED

Definition — The entire watershed along the Heart River that supplies the City of Dickinson's municipal water would be excluded from further consideration for coal leasing.

Rationale — Dickinson's only source of municipal water is from the watershed of the Heart River. It is necessary to protect the quality and quantity of this water supply from the possible adverse effects of coal mining.

Effect of Tradeoff

CSA	Gross Totals	
	Acres	Coal Tonnage (Millions)
Dickinson	38,536	1315.04
TOTAL	38,536	1315.04

TABLE B-4
WILDLIFE THRESHOLD ACREAGES BY ALTERNATIVE¹

CSA	ALTERNATIVE B					ALTERNATIVE C					ALTERNATIVE D				
	Remaining Threshold Acres		Percent		Original Threshold Acres ²	Remaining Threshold Acres		Percent		Original Threshold Acres ²	Remaining Threshold Acres		Percent		Original Threshold Acres ²
	Acres ³	Excluded	Acres	Excluded		Acres	Excluded	Acres ³	Excluded		Acres	Excluded	Acres ³	Excluded	
Antelope	3685	3386	40	1354	1919	2164	50	1082	15.34	510	30	153	2.17	2.17	2.17
Arnegard	7409	4294	20	859	8.27	4294	50	2147	20.66	5602	90	5042	48.53	48.53	48.53
Beulah-Zap	5582	4949	30	1485	15.59	3253	50	1627	17.08	169	0	0	0.00	0.00	0.00
Bowman-Gascoyne	1929	2169	40	868	59.54	2169	60	1301	89.25	2002	80	1602	109.90	109.90	109.90
Center-Stanton	2811	2635	40	1054	9.22	2193	60	1316	11.52	592	50	296	2.59	2.59	2.59
Dickinson	3046	1987	10	199	6.79	1450	20	290	9.90	741	50	371	12.66	12.66	12.66
Divide	0	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0.00	0.00
Dunn Center	5195	3193	20	639	14.54	1911	20	382	8.69	982	50	491	11.17	11.17	11.17
Elgin-New Leipzig	1278	924	10	92	1.45	731	30	219	3.45	628	60	377	5.94	5.94	5.94
Elkhorn	7326	6280	40	2512	21.98	4883	50	2442	21.37	2461	70	1723	15.08	15.08	15.08
Fortuna	998	562	10	56	1.24	562	30	169	3.76	560	60	336	7.47	7.47	7.47
Garrison	1150	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0.00	0.00
Golden Valley	191	181	0	0	0.00	181	0	0	0.00	181	0	0	0.00	0.00	0.00
Hanks	12762	9506	20	1901	44.91	7894	50	3947	93.25	4787	70	3351	79.17	79.17	79.17
Keene	12059	10494	30	3148	31.40	9363	60	5618	56.04	2244	50	1122	11.19	11.19	11.19
Mott	3418	2786	10	279	2.69	2599	50	1300	12.51	1719	60	1031	9.92	9.92	9.92
New England	3964	1624	10	162	2.84	979	20	196	3.43	919	10	92	1.61	1.61	1.61
Niobe	0	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0.00	0.00
Sand Creek	10515	6164	10	616	7.44	5820	40	2328	28.11	4752	80	3802	45.91	45.91	45.91
Tobacco Garden	1919	197	0	0	0.00	197	0	0	0.00	224	0	0	0.00	0.00	0.00
Underwood	0	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00	0.00	0.00
Velva	261	122	0	0	0.00	54	0	0	0.00	0	0	0	0.00	0.00	0.00
Washburn	478	429	20	86	0.99	325	40	130	1.50	40	0	0	0.00	0.00	0.00
Williston	4268	2167	10	217	3.27	2028	40	811	12.21	740	0	0	0.00	0.00	0.00
Totals	90244	64049	24	15527	251.35	53050	48	25305	408.07	29853	66	19787	363.31	363.31	363.31
Percent of Original Threshold Acres			17				28				22				

¹See Text for Explanation

²Acres of key wildlife habitats remaining after application of the wildlife unsuitability criteria.

³Acres of key wildlife habitats remaining after application of wildlife unsuitability criteria, all other unsuitability criteria, multiple-use tradeoffs, and surface owner consultation.

⁴Millions of tons

TABLE B-5
ALTERNATIVE A
ACRES EXCLUDED FROM FURTHER CONSIDERATION DUE TO MULTIPLE-USE TRADEOFFS

CSA	Slopes > 30%	Wildlife Refuge Watershed	Buried- Valley Aquifer	Intensive Use Buffer	Oil & Gas Fields	Wetlands	Municipal Watershed	Land Use Plan Consist.	Lake Buffer Zone	Gross Total	Net Total
ANTELOPE	0	0	0	0	0	0	0	0	0	0	0
ARNEGARD	0	0	0	0	0	0	0	0	0	0	0
BEULAH-ZAP	0	0	0	0	0	0	0	0	0	0	0
BOWMAN-GASCOYNE	0	1440	0	0	0	0	0	0	0	1440	1440
CENTER-STANTON	0	0	0	0	0	0	0	0	0	0	0
DICKINSON	0	0	0	0	0	0	54492	0	0	54492	28986
DIVIDE											
DUNN CENTER	0	0	0	0	0	0	0	0	800	800	0
ELGIN-NEW LEIPZIG	100	0	0	0	0	0	0	0	0	100	100
ELKHORN											
FORTUNA											
GARRISON	0	0	0	0	0	0	0	0	0	0	0
GOLDEN VALLEY	0	0	0	0	0	80	0	0	0	80	80
HANKS	1920	1760	1200	0	0	0	0	0	0	4880	4605
MOTT	240	1000	0	0	0	0	0	0	0	1240	1031
NEW ENGLAND	620	0	0	0	0	0	0	0	0	620	620
NIOBE											
SAND CREEK	1050	240	520	440	0	0	0	320	0	2570	2410
TOBACCO GARDEN	5860	0	6440	0	0	0	0	0	12230	24530	2507
UNDERWOOD	0	0	0	0	0	0	0	0	0	0	0
VELVA											
WASHBURN	0	0	0	0	0	0	0	0	0	0	0
WILLISTON	31390	0	2360	0	10168	0	0	0	23357	67275	3493
TOTAL	41180	4440	10520	440	10168	80	54492	320	36387	158027	45272

TABLE B-6
ACRES EXCLUDED FROM FURTHER CONSIDERATION DUE TO MULTIPLE-USE TRADEOFFS
ALTERNATIVE B

CSA	Communities Having 1980 Pop. Less Than 500 Persons		Communities Having 1980 Pop. Equal To or Greater Than 500 Persons		Industrial Concentrations	Missile Silos	Minuteman Communication Cables	Electric Transmission Lines Equal To or Greater Than 230 KV	Pipelines Equal To or Greater Than 12 Inches in Diameter	Operating Railroads	Agricultural Experiment Station	Eligible Knife River Flint Quarry District	Writing Rock Historic Site	Wildlife Threshold	Key Oil & Gas Fields	City of Dickinson Municipal Watershed	Gross Total	Net Total
	Pop. Less Than 500 Persons	Greater Than 500 Persons	Pop. Equal To or Greater Than 500 Persons	Greater Than 500 Persons														
Antelope	0	0	640	0	0	0	0	63	15	0	0	0	0	1354	0	0	2072	2014
Arnegard	0	0	0	0	0	0	0	0	75	0	0	0	0	859	920	0	1854	1774
Beulah-Zap	0	0	0	0	60	0	0	115	76	0	0	0	0	1485	0	0	1736	1556
Bowman-Gascoyne Center	520	0	0	0	0	0	0	6	0	33	0	0	0	868	0	0	1427	1395
Stanton	0	160	0	0	614	0	0	105	42	0	0	0	0	1054	0	0	1975	1640
Dickinson	80	160	80	0	1120	0	0	60	30	18	0	0	0	199	9400	38536	49683	40263
Divide	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3	0
Dunn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Center	240	325	480	0	0	0	0	96	60	93	0	3761	0	639	0	0	5694	3766
Elgin-New Leipzig	0	0	0	0	0	0	0	0	0	0	0	0	0	92	0	0	92	92
Elkhorn	0	0	0	0	0	0	0	0	63	0	0	0	0	2512	0	0	2575	2512
Fortuna	480	0	0	0	0	0	0	0	0	42	0	0	40	56	2400	0	3018	1875
Garrison	0	0	0	0	0	8560	36	0	0	6	0	0	0	0	0	0	8602	5623
Golden Valley	0	200	0	0	0	0	0	3	0	9	0	0	0	0	480	0	692	861
Hanks	345	0	0	0	0	0	0	0	0	54	0	0	0	1901	0	0	2300	2188
Keene	40	0	0	0	0	0	0	0	221	0	0	0	0	3148	46280	0	49689	45496
Mott	0	0	0	0	0	0	0	0	0	0	0	0	0	279	0	0	279	279
New England	40	240	0	0	0	0	0	0	0	0	0	0	0	162	0	0	442	277
Niobe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sand Creek	0	200	920	0	360	0	0	0	0	0	440	0	0	616	3840	0	6376	5742
Tohacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Garden	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Underwood	0	0	0	0	0	0	0	6	0	9	0	0	0	0	0	0	15	0
Velva	160	0	0	0	0	2680	230	0	9	21	0	0	0	0	0	0	3100	1525
Washburn	0	0	0	0	0	0	0	12	0	0	0	0	0	86	0	0	98	86
Williston	40	0	560	0	0	0	0	0	69	24	0	0	0	217	13200	0	14110	8189
Total	1945	1925	2040	2154	2154	11240	266	469	660	309	440	3761	40	15527	76520	38536	155832	127153

TABLE B-7
ACRES EXCLUDED FROM FURTHER CONSIDERATION DUE TO MULTIPLE-USE TRADEOFFS
ALTERNATIVE C

Communities Having 1980 Pop. Less Than 500 Persons				Communities Having 1980 Pop. Equal To or Greater Than 500 Persons				Pipelines Equal To or Greater Than 12 Inches in Diameter										Eligible Knife River Flint Quarry District				Writing Rock Historic Site				Wildlife Threshold				Steep Slopes > 30%				Key Oil & Gas Fields				City of Dickinson Municipal Watershed				Gross Total		Net Total	
CSA	Pop. Less Than 500 Persons	Greater Than 500 Persons	Residential Subdivisions	Industrial Concentrations	Minuteman Missile Silos	Minuteman Communication Cables	Transmission Lines Equal To or Greater Than 230 KV	Electric or Greater Than 12 Inches in Diameter	Operating Railroads	Agricultural Experiment Station	Eligible Knife River Flint Quarry District	Writing Rock Historic Site	Wildlife Threshold	Steep Slopes > 30%	Key Oil & Gas Fields	City of Dickinson Municipal Watershed	Gross Total	Net Total																											
Antelope	0	640	0	0	0	0	63	15	0	0	0	0	1082	2264	0	0	4064	3436																											
Arnegard	0	0	0	0	0	0	0	75	0	0	0	0	2147	46	920	0	3188	3108																											
Beulah-Zap	0	0	0	60	0	0	115	76	0	0	0	0	1627	3952	0	0	5830	4013																											
Bowman-Gascoyne	520	0	0	0	0	0	6	0	33	0	0	0	1301	0	0	0	1860	1828																											
Center-Stanton	0	160	0	614	0	0	105	42	0	0	0	0	1316	374	0	0	2611	2457																											
Dickinson	80	160	80	1120	0	0	60	30	18	0	0	0	290	894	9400	38536	50668	42877																											
Divide	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3	0																											
Dunn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																											
Center-Elgin-New	240	325	480	0	0	0	96	60	93	0	3761	0	382	1995	0	0	7432	5339																											
Leipzig	0	0	0	0	0	0	0	0	0	0	0	0	219	220	0	0	439	399																											
Elkhorn	0	0	0	0	0	0	0	63	0	0	0	0	2442	1802	0	0	4307	4185																											
Fortuna	480	0	0	0	0	0	0	0	42	0	0	40	169	0	2400	0	3131	2028																											
Garrison	0	0	0	0	8560	36	0	0	6	0	0	0	0	0	0	0	8602	5623																											
Golden	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																											
Valley	0	200	0	0	0	0	3	0	9	0	0	0	0	0	480	0	692	692																											
Hanks	345	0	0	0	0	0	0	0	54	0	0	0	3947	2597	0	0	6943	6663																											
Keene	40	0	0	0	0	0	0	221	0	0	0	0	5618	3866	46280	0	56025	49462																											
Mott	0	0	0	0	0	0	0	0	0	0	0	0	1300	433	0	0	1733	1591																											
New	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																											
England	40	240	0	0	0	0	0	0	0	0	0	0	196	981	0	0	1457	1266																											
Niobe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																											
Sand Creek	0	200	920	360	0	0	0	0	0	440	0	0	2328	1379	3840	0	9467	8406																											
Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																											
Garden	0	0	0	0	0	0	0	0	0	0	0	0	0	22597	0	0	22597	283																											
Underwood	0	0	0	0	0	0	6	0	9	0	0	0	0	0	0	0	15	0																											
Velva	160	0	0	0	2680	230	0	9	21	0	0	0	0	100	0	0	3200	1596																											
Washburn	0	0	0	0	0	0	12	0	0	0	0	0	130	227	0	0	369	273																											
Williston	40	0	560	0	0	0	0	69	24	0	0	0	811	35751	13200	0	50455	9030																											
Total	1945	1925	2040	2154	11240	266	469	660	309	440	3761	40	25305	79478	76520	38536	245088	154555																											

TABLE B-8
ACRES EXCLUDED FROM FURTHER CONSIDERATION DUE TO MULTIPLE-USE TRADEOFFS
ALTERNATIVE D

Communities Having 1980 Pop. Less Than 500										Communities Having 1980 Pop. Equal To or Greater Than 500 Persons										Pipelines Equal To or Greater Than 12 Inches in Diameter										Eligible River Flint Rock Writing Quarry Historic District Site										Steep Slopes & Gas Fields										Key Oil Buried-Valley Aquifers										City of Dickinson Municipal Watershed										Gross Total		Net Total	
CSA	Persons	Greater Than 500 Persons	Residential Subdivisions	Industrial Concentrations	Minuteman Missile Silos	Minuteman Communication Cables	Electric Transmission Lines Equal To or Greater Than 230 KV	Pipelines Equal To or Greater Than 12 Inches in Diameter	Operating Railroads	Agricultural Experiment Station	Eligible River Flint Rock Writing Quarry Historic District Site	Wildlife Threshold >15%	Slopes >15%	Gas Fields	Key Oil Buried-Valley Aquifers	City of Dickinson Municipal Watershed	Gross Total	Net Total																																																							
Antelope	0	640	0	0	0	0	63	15	0	0	0	153	9806	0	917	0	11594	7065																																																							
Arnegard	0	0	0	0	0	0	0	75	0	0	0	5042	1499	920	1107	0	8643	8320																																																							
Beulah-Zap	0	0	0	60	0	0	115	76	0	0	0	0	24362	0	1825	0	26438	18523																																																							
Bowman																																																																									
Center	520	0	0	0	0	0	6	0	33	0	0	1602	846	0	0	0	3007	2890																																																							
Stanton	0	160	0	614	0	0	105	42	0	0	0	296	4667	0	1004	0	6888	3854																																																							
Dickinson	80	160	80	1120	0	0	60	30	18	0	0	371	7862	9400	0	38536	57717	47614																																																							
Divide	0	0	0	0	0	0	3	0	0	0	0	0	0	0	49	0	52	29																																																							
Dunn	*																																																																								
Center	240	325	480	0	0	0	96	60	93	0	3761	491	8410	0	2635	0	16591	14017																																																							
Elgin-New																																																																									
Leipzig	0	0	0	0	0	0	0	0	0	0	0	377	717	0	200	0	1294	887																																																							
Elkhorn	0	0	0	0	0	0	0	63	0	0	0	1723	8574	64	64	0	10424	10232																																																							
Fortuna	480	0	0	0	0	0	0	0	42	0	40	336	1091	2400	5903	0	10292	4371																																																							
Garrison	0	0	0	0	8560	36	0	0	6	0	0	0	2703	0	50	0	11355	5837																																																							
Golden																																																																									
Valley	0	200	0	0	0	0	3	0	9	0	0	0	136	480	0	0	828	940																																																							
Hanks	345	0	0	0	0	0	0	0	54	0	0	3351	9137	0	562	0	13449	12911																																																							
Keene	40	0	0	0	0	0	0	221	0	0	0	1122	39097	46280	7495	0	94255	72358																																																							
Mott	0	0	0	0	0	0	0	0	0	0	0	1031	4808	0	0	0	5839	5274																																																							
New																																																																									
England	40	240	0	0	0	0	0	0	0	0	0	92	2281	0	0	0	2653	2463																																																							
Niobe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																							
Sand Creek	0	200	920	360	0	0	0	0	0	440	0	3802	8577	3840	878	0	19017	15991																																																							
Tobacco																																																																									
Garden	0	0	0	0	0	0	0	0	0	0	0	0	38095	0	4659	0	42754	2665																																																							
Underwood	0	0	0	0	0	0	6	0	9	0	0	0	497	0	114	0	626	189																																																							
Velva	160	0	0	0	2680	230	0	9	21	0	0	0	4162	0	1037	0	8299	1992																																																							
Washburn	0	0	0	0	0	0	12	0	0	0	0	0	709	0	0	0	721	588																																																							
Williston	40	0	560	0	0	0	0	69	24	0	0	0	66951	13200	3774	0	84618	17089																																																							
Total	1945	1925	2040	2154	11240	266	469	660	309	440	3761	40	19789	244987	76520	32273	38536	437354	256099																																																						

APPENDIX B-4 — SURFACE OWNER CONSULTATION

The 1977 Surface Mining Control and Reclamation Act (SMCRA) and implementing regulations (43 CFR 3420.1-4) require that all comprehensive land use plans involving potential coal leasing shall include consultation with qualified surface owners over federal coal. During the week of December 2, 1986, letters were sent to 1844 surface owners requesting the surface owner to state his/her preference for or against the surface mining of federal coal under his/her land. Surface owners were requested to respond before January 21, 1986. A news release announcing the consultation process and deadlines was provided news media located throughout western North Dakota. Three open houses were held in Dickinson, Williston and Hazen, North Dakota, to answer questions of surface owners. A follow-up letter was sent during the week of January 20, 1986, asking that all responses be returned to BLM by February 14, 1986. Another news release announcing the extended deadline was issued to media located throughout western North Dakota.

Surface owners were not recontacted in portions of the nine CSAs that were considered in the McKenzie-Williams and Southwest North Dakota MFPs (USDI 1984c, d) because the views expressed during the preparation of these plans were considered up-to-date. **The validity of this assumption was supported by the lack of concern raised by surface owners over federal coal within the two MFP areas following the public announcement of the consultation process by both BLM and local interest groups.** All surface owners located over federal coal in the remaining 15 CSAs were contacted.

In the letter, owners were asked to show themselves as: (1) in favor of, (2) against, or (3) unsure about leasing of federal coal underneath their surface. They were also asked to state if their surface was already under lease by a coal company and whether they met the requirements as a qualified surface owner under SMCRA. A sample of the consultation letter and response form are included at the end of this appendix.

Areas with significant surface owner opposition were dropped from further consideration for leasing.

In all cases boundaries of significant opposition were delineated using some or all of the eight decision factors listed below. Greatest emphasis was placed on the number of landowners involved, the total acreage of federal coal included under "opposed," and the distribution of "opposed" responses. For instance, one "opposed" response involving 800 acres would not be considered significant while four "opposed" responses covering an equal area would be significant, all other factors being equal.

The application of the decision factors involved an extremely complex system of weighing and comparing any number of combinations. Detailed explanations and maps can be provided by the Dickinson District Office.

The eight decision factors, listed in descending order of importance, were:

1. Number of landowners over federal coal within the CSA opposed to leasing;
2. Acreage included under "opposed";
3. Distribution of "opposed" comments;
4. Percent of federal coal in the CSA;
5. Distribution of federal coal;
6. Location, size, and number of existing federal leases;
7. Location, size, and number of surface lease agreements on lands over federal coal.
8. Location, size, and number of private and state coal leases;

Results of surface owner consultation are shown in Tables B-9 and B-10.

APPENDIX B-5 — LANDS ACCEPTABLE WITH STIPULATIONS

Included in the acreage acceptable for further consideration for coal leasing are lands with special reclamation stipulations for wildlife and buried-valley aquifers. Originally 240,465 acres were included in this category. However, overlap with other unsuitability criteria, multiple-use tradeoffs, and surface owner opposition reduced the acreages. The net acreages appear in Table B-11.

The wildlife habitats in this category were identified at the same time the wildlife unsuitability criteria and multiple-use tradeoffs were applied. These habitats consisted of small, scattered units (less than 40 acres) that could be successfully reclaimed. They include native prairie with gentle slopes, small scattered wetlands, shelterbelts, woodlots, and small riparian areas. The specific sites are mapped (1:100,000) and are available for inspection in the Dickinson District Office. The vegetative reclamation stipulation for each parcel will be that an acreage equivalent to that disturbed be reclaimed to approximately its former condition (e.g., species diversity, production, canopy cover). **This is the same stipulation that would be applied to Wildlife Threshold acreages that might be mined.**

Buried-valley aquifer stipulations will be evaluated on a site-specific basis. Stipulations will depend on the action needed to prevent damage to the ground water hydrology of the aquifer.

Areas near National Park Service units in three CSAs have been designated as special review areas. These areas may require stipulations to protect high resource values. Acreages for this review area listed in Table B-11 include only areas fully acceptable for coal leasing or exchange. However, acreages under the wildlife threshold category in those CSAs would also be subject to special review.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT DICKINSON DISTRICT OFFICE

P.O. Box 1229
Dickinson, ND 58602

Dear Landowner:

The Bureau of Land Management (BLM) is screening federal coal areas to identify which areas should be considered further for possible leasing in accordance with the Department of the Interior's coal management regulations. The screening is part of the process of preparing a resource management plan for public lands and federal minerals managed by BLM in North Dakota.

Our review of federal and county records shows that you own the surface of lands in which the United States has retained ownership of the coal. On the enclosed consultation form you will find the legal description of these lands.

The Surface Mining Control and Reclamation Act of 1977 gives certain types of protection to surface owners who qualify under the law. The law contains both a consent requirement and a consultation requirement. If you qualify, the BLM cannot issue a coal lease and authorize a company to surface mine the coal under your land unless you agree to let that mining take place (the consent requirement). The surface mining law also requires BLM to consult with surface owners as part of the planning process and ask whether they favor or oppose leasing of coal under their land (the consultation requirement).

The purpose of this letter is to consult with you and to give you a chance to tell us whether you favor or oppose leasing the coal under your land. The BLM is not now proposing to lease the coal under you land. Also, we are not asking for your consent to leasing and mining. The resource management plan we are preparing will help us decide which coal lands in North Dakota should and should not be considered further for possible leasing. The decision on which specific coal lands will be leased will be made in a separate process.

The reason for this consultation with you and other surface owners in your area is to give the BLM an opportunity to understand your feelings about surface mining of coal under your land. The coal under your land might be included in a tract which we would offer for federal leasing. However, if a significant number of qualified surface owners in your area are opposed to surface mining of coal under their land, we may decide to refrain from leasing any federal coal in that area for surface mining. If this is the case, receiving your views at this early stage of planning will allow us to avoid making specific plans for coal leasing in your area.

Views Expressed During Consultation Not Binding

The views you express in this consultation are not binding, either on you or on the BLM. Here is what your views will do and what they will not do:

1. If you state at this time that you favor leasing, you may still stop surface mining at any time before a lease is issued by withholding your consent to mining. This will prevent the BLM from leasing the coal. However, if you (or a previous owner) have already given written consent to allow surface coal mining on your land, you may have already given up your right to stop leasing and mining.
2. If you express a preference for leasing, the BLM is under no obligation to offer the coal under your land for lease. Analysis may indicate the coal should not be leased because of environmental problems, that other lands contain better coal and should be leased first, or that there is no need to lease the coal under your land because sufficient coal lands are already available for mining.
3. If you express a preference against surface coal mining under your land and a significant number of other surface owners in your area are opposed to leasing a part of or the whole area may be eliminated from consideration for leasing. However, the BLM will consider other matters, such as the availability of other coal land for leasing, in making the decision whether or not to issue leases in the area.

The Consent Requirement vs. The Consultation Requirement

The two protections of the surface mining law for surface owners are very different.

The consent requirement concerns each surface owner's authority to prevent surface mining of coal under his land. The BLM will not at any time seek consent from you directly. If a coal company wants to surface mine the coal under your land, the company will have to negotiate with you to obtain your consent to mine. If a qualified surface owner refuses to grant consent for surface coal mining, BLM is required to withhold the coal from leasing. Your decision to give consent or refuse consent does not need to be made until a later time when BLM is preparing a specific coal leasing plan that includes your lands.

The consultation requirement of the law concerns the ability of a group of surface owners to influence coal leasing plans in their area. The BLM has to decide during the planning process whether to make lands eligible for coal leasing or to eliminate lands from leasing consideration within the life of the resource management plan. If there are a significant number of surface owners opposed to leasing for surface mining, and if other acceptable areas are available for leasing, the BLM may decide not to lease lands in the area for surface coal mining. Your preferences, along with those of neighboring surface owners, will be taken into consideration now, during planning.

The Effect of Significant Opposition to Leasing

If a significant number of surface owners in your area oppose leasing for surface coal mining, the BLM may issue no leases in the area, even though some surface owners do favor surface coal mining under their land. Just how many surface owners would amount to a "significant number" cannot be answered at this time. This will have to be determined on a case-by-case basis for each coal study area. But, in no case will the coal under your land be leased without your consent if you are a qualified surface owner.

Qualified Surface Owners

The protections of the surface mining law apply only to surface owners as defined by the surface mining law. The law defined surface owners as a person or persons who:

- (1) hold legal or equitable title to the land surface;
- (2) have their principal place of residence on the land; or personally conduct farming or ranching operations upon a farm or ranch unit to be affected by surface coal mining operations; or receive directly a significant portion of their income, if any, from such farming or ranching operations; and,
- (3) have met the conditions of paragraphs (1) and (2) for a period of at least three years prior to the granting of consent.

If you meet the requirements of law listed above, you can help ensure that your preferences are considered in the BLM planning process by letting us know that you meet each of the requirements. If you do not meet the requirements, please let us know this also.

If Consent to Mine has Already Been Given

If you have already given your consent to a coal company or someone else to surface mine the coal under your land, it is important that the BLM know about this in preparing its land use plans. The enclosed consultation form provides an opportunity for you to list any such agreements.

If you have already given your consent to surface coal mining on your land, the BLM must consider you to be in favor of mining those tracts to which the consent agreements apply [according to BLM regulations 43 CFR 3420.1-4 (e)(4)(ii)].

Outside Advice

You may want to seek the advice of someone outside the federal government (for example, neighboring surface owners, a lawyer, or someone familiar with surface coal mining operations) before you answer this letter.

Time for Answering

In order to fully consider your views, we must have your response to this consultation by January 6, 1986. Please express your views on the enclosed form with preprinted name and legal descriptions

The form is designed so that you can respond individually for each separate parcel of land, and you may separate the parcels by legal descriptions as you see fit. If there is an error in the preprinted legal descriptions, please make the necessary correction. The form without preprinted name and legal descriptions is for your records. You may want to fill it out and save it, so you will have a record of your response.

The preprinted descriptions only cover federal coal with an identified potential for development. If you wish to know the boundaries of coal with development potential in your area, you can inspect the coal deposit maps on display at the County Auditor's Office in your county. Those who are unable to visit the courthouse can request deposit maps from this office.

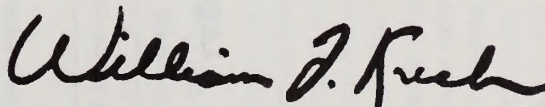
If you have questions concerning consultation or any other aspect of the planning process, please call Mark Stiles or Ken Burke at (701) 225-9148. Or stop in at our office, which is on the second floor of the Gate City Building, 204 Sims Street, Dickinson. Our office hours are from 7:45 a.m. to 4:30 p.m.

To make it easier for surface owners to talk individually with BLM staff about consultation, three question-and-answer sessions will be held. These sessions will be informal, there will be no program presented, and persons can drop by any time during the scheduled hours.

Schedule

We are looking forward to finding out your views.

Sincerely yours,

A handwritten signature in black ink, reading "William J. Rush". The signature is written in a cursive style with a large, stylized "W" and "R".

District Manager

(See step-by-step instructions on the reverse side.)

(See step-by-step instructions on the reverse side.)

Legal Description

LANDOWNER SIGNATURE

DATE

DIRECTIONS

(Numbers apply to circled numbers on reverse side.)

1. Write in township, range, and section numbers, and under parcel indicate the subdivision of the section. If all of the section is included, write "all." (The preprinted description with your name indicates the lands you own over federal coal.) The line to the right of the description you provide is for information pertaining only to that parcel. Do not list lands over nonfederal coal.
5. What are your attitudes toward surface mining the federal coal under your land? Place an X in the column that applies: In Favor, Unsure, or Opposed. If none of the three categories exactly represents your position, please choose the one that comes closest to your position.

Example

Township	Range	Section	Parcel
144	94	8	SE1/4

2. Write in month and year land was acquired by you. If you are buying the land through a contract for deed, indicate when the contract was signed.

3. Some, all, or none of the categories (a, b, or c) apply to you. Write in the letter(s) for the category(s) that does apply.

4. If you or a previous owner signed an agreement or lease permitting surface mining of coal in the land described, and if that lease is still in effect, write "Yes," date of the lease, date lease expires, and name of the person or company holding the lease. (The lease might be called a "coal lease," even though it applies only to the surface—not to the federal coal, which can only be leased by the federal government.) If you or a previous surface owner have not leased the surface for coal mining, write "No."

Remember, the views you express here are not legally binding.

If you have additional comments please make them in the space provided. If you have any questions concerning surface owner consultation, please contact the Bureau of Land Management at (701) 225-9148 or visit the Dickinson BLM office located at 204 Sims, Dickinson, North Dakota.

COMMENTS

TABLE B-9
SUMMARY OF SURFACE OWNER CONSULTATION¹

Coal Study Area	Letters Sent	Responses Received	Percent Response	Surface Owners Qualified or Assumed Qualified	Qualified Owners Under Previous Consent Agreements	Qualified Owners Under Previous Consent Responding "Opposed"	Qualified Owners Without Previous Consent Responding "In Favor"	Qualified Owners Without Previous Consents Responding "Unsure" ²	Qualified Owners Without Previous Consents Responding "Opposed"
Antelope	147	57	39	141	26	9	15	14	21
Arnegard ³	93	57	61	90	2	0	5	8	38
Beulah-Zap	167	70	42	154	23	3	19	20	18
Bowman-Gascoyne ⁴	99	50	51	99	30	10	19	—	11
Center-Stanton	107	44	41	96	25	3	15	7	11
Dickinson ³	417	216	52	400	37	21	17	22	137
Divide	24	14	58	22	0	0	1	1	10
Dunn Center	285	149	52	272	53	34	30	14	92
Elgin-New Leipzig, Mott, and New England ⁵	529	290	55	529	78	44	26	0	162
Elkhorn	72	33	46	68	0	0	5	6	18
Fortuna	99	62	63	93	1	1	16	18	22
Garrison	72	39	54	67	4	2	7	7	20
Golden Valley	94	55	59	86	18	2	8	15	24
Hanks ⁴	175	115	66	175	28	13	10	—	61
Keene	191	89	47	179	1	1	11	23	46
Niobe	2	1	50	2	0	0	0	0	1
Sand Creek ⁴	263	140	53	263	42	18	18	—	71
Tobacco Garden ³	162	77	48	158	2	0	6	12	41
Underwood	6	4	67	6	1	0	2	1	1
Velva	83	39	47	80	4	0	7	8	20
Washburn	13	8	62	10	4	0	2	1	2
Williston ⁴	303	141	47	303	49	23	30	—	61
Total	3403	1750	51	3293	428	184	269	177	888

¹Numerical summary only; identification of significant opposition was based on maps and overlays located in the Dickinson District Office.

²Tabulations of "unsure" responses are not available for CSAs or portions of CSAs included in the McKenzie-Williams and Southwest North Dakota MFPs.

³Portions of surface owner consultation conducted during preparation of McKenzie-Williams or Southwest North Dakota MFPs.

⁴Surface owner consultation conducted during preparation of McKenzie-Williams or Southwest North Dakota MFPs.

⁵Consultation results combined in Southwest North Dakota MFP.

TABLE B-10
ACRES EXCLUDED FROM CONSIDERATION DUE TO
SIGNIFICANT SURFACE OWNER OPPOSITION

CSA	ALTERNATIVES					
	A		B, C, D		B	C
	Gross	Net	Gross	Net	Net	Net
Antelope	0	0	0	0	0	0
Arnegard	9,563	9,563	10,900	10,561	10,517	10,082
Beulah-Zap	0	0	1,800	1,779	1,779	55
Bowman-Gascoyne	0	0	0	0	0	0
Center-Stanton	0	0	1,120	1,120	1,120	1,120
Dickinson	0	0	15,040	9,050	8,882	8,009
Divide			480	480	480	480
Dunn Center	0	0	15,640	14,315	14,315	12,585
Elgin-New Leipzig	0	0	240	240	240	240
Elkhorn			4,080	4,070	3,911	3,610
Fortuna			2,760	1,676	1,636	1,517
Garrison	0	0	1,400	627	627	558
Golden Valley	0	0	2,520	2,478	2,478	2,360
Hanks	0	0	3,280	3,084	2,755	1,917
Keene			18,280	16,304	16,085	9,123
Mott	0	0	0	0	0	0
New England	8,600	3,800	12,920	11,889	11,770	11,668
Niobe			0	0	0	0
Sand Creek	5,520	5,280	8,040	7,906	7,298	6,514
Tobacco Garden	4,760	429	22,390	3,884	3,796	3,103
Underwood	0	0	0	0	0	0
Velva			0	0	0	0
Washburn	0	0	0	0	0	0
Williston	13,174	40	10,640	154	154	154
TOTAL	41,617	19,112	131,530	89,617	87,843	73,095

TABLE B-11
COAL ACREAGES WITH SPECIAL STIPULATIONS

Coal Study Area	Vegetative Reclamation Stipulation			Buried-Valley Aquifer National Park Service Stipulation		
	Alternative			Alternative		
	B	C	D	C	C	D
Antelope	7,168	6,780	5,395	486		
Arnegard	1,313	1,272	1,182	384		
Beulah-Zap	13,215	12,593	7,259	1,152		
Bowman-Gascoyne	5,053	5,025	4,746	0		
Center-Stanton	5,630	5,496	4,944	256		
Dickinson	7,336	7,336	5,442	0	16,795	16,310
Divide	1,490	1,490	1,453	49		
Dunn Center	17,898	17,562	15,697	1,945		
Elgin-New Leipzig	3,686	3,686	3,628	0		
Elkhorn	5,043	4,952	1,884	64	13,285	10,240
Fortuna	4,557	4,557	2,652	2,483		
Garrison	246	246	160	26		
Golden Valley	738	738	738	0	6,145	6,145
Hanks	6,271	6,222	5,265	179		
Keene	16,680	16,680	5,672	2,432		
Mott	10,913	10,897	9,489	0		
New England	17,047	17,021	16,781	0		
Niobe	80	80	80	0		
Sand Creek	15,211	15,006	11,126	588		
Tobacco Garden	1,751	1,705	1,377	793		
Underwood	55	55	7	0		
Velva	540	540	513	201		
Washburn	400	339	224	0		
Williston	10,166	10,102	5,316	1,280		
Totals	152,487	150,380	111,030	12,318	36,225	32,695

TABLE B-12
SUMMARY OF AREAS ACCEPTABLE FOR FURTHER
CONSIDERATION

CSA	Acres Acceptable by Alternative			
	A	B	C	D
Antelope	18265	29436	28014	24385
Arnegard	2037	12580	11290	6513
Beulah-Zap	9670	43591	41134	28348
Bowman-Gascoyne	19560	19694	19261	18199
Center-Stanton	11695	23523	22706	21309
Dickinson	23469	52473	50027	46163
Divide		2819	2819	2790
Dunn Center	27208	65283	63710	56762
Elgin-New Leipzig	12900	13743	13436	12948
Elkhorn		18531	17017	11271
Fortuna		7310	7197	4973
Garrison	6817	2343	2343	2198
Golden Valley	11413	17611	17780	17650
Hanks	40234	38911	34765	29355
Keene		46300	42553	26619
Mott	40379	41115	39803	36120
New England	73100	78065	77195	76100
Niobe		160	160	160
Sand Creek	49350	41831	39775	32974
Tobacco Garden	4092	9791	9596	7907
Underwood	1030	1605	1605	1416
Velva		2633	2562	2166
Washburn	983	1189	1002	687
Williston	38977	28799	27958	19899
Total	391179	599496	573868	487072

APPENDIX C

OIL AND GAS LEASE STIPULATIONS AND LEASING RESTRICTIONS

APPENDIX C-1 — STANDARD OIL AND GAS LEASE STIPULATIONS FOR MONTANA AND THE DAKOTAS

The following form is presently used for all new oil and gas leases issued in areas covered by this RMP.

(Serial Number)

OIL AND GAS LEASE STIPULATIONS

ESTHETICS—To maintain esthetic values, all surface-disturbing activities, semipermanent and permanent facilities may require special design including location, painting and camouflage to blend with the natural surroundings and meet the intent of the visual quality objectives of the Federal Surface Managing Agency (SMA).

EROSION CONTROL—Surface-disturbing activities may be prohibited during muddy and/or wet soil periods.

CONTROLLED OR LIMITED SURFACE USE STIPULATION—This stipulation may be modified, consistent with land use documents, when specifically approved in writing by the Bureau of Land Management (BLM) with concurrence of the SMA. Distances and/or time periods may be made less restrictive depending on the actual onground conditions. The prospective lessee should contact the SMA for more specific locations and information regarding the restrictive nature of this stipulation.

The lessee/operator is given notice that the lands within this lease may include special areas and that such areas may contain special values, may be needed for special purposes, or may require special attention to prevent damage to surface and/or other resources. Possible special areas are identified below. Any surface use or occupancy within such special areas will be strictly controlled, or if **absolutely necessary**, excluded. Use or occupancy will be restricted only when the BLM and/or the SMA demonstrates the restriction necessary for the protection of such special areas and existing or planned uses. Appropriate modifications to imposed restrictions will be made for the maintenance and operations of producing oil and gas wells.

After the SMA has been advised of specific proposed surface use or occupancy on the leased lands, and on request of the lessee/operator, the Agency will furnish further data on any special areas which may include:

100 feet from the edge of the rights-of-way from highways, designated county roads and appropriate federally-owned or controlled roads and recreation trails.

500 feet, or when necessary, within the 25-year flood plain from reservoirs, lakes, and ponds and intermittent, ephemeral or small perennial streams; 1,000 feet, or when necessary, within the 100-year flood plain from larger perennial streams, rivers, and domestic water supplies.

500 feet from grouse strutting grounds. Special care to avoid nesting areas associated with strutting grounds will be necessary during the period from March 1 to June 30. One-fourth mile from identified essential habitat of state and federal sensitive species. Crucial wildlife winter ranges during the period from December 1 to May 15, and in elk calving areas, during the period from May 1 to June 30.

300 feet from occupied buildings, developed recreational areas, undeveloped recreational areas receiving concentrated public use and sites eligible for or designated as National Register sites.

Seasonal road closures, roads for special uses, specified roads during heavy traffic periods and on areas having restrictive off-road vehicle designations.

On slopes over 30 percent, or 20 percent on extremely erodible or slumping soils.

(Date)

(Signature)

See Notice On Back

MT-3109-1 (April 1987)

NOTICE

APPLICATIONS FOR PERMIT TO DRILL (APDs)—The BLM district or resource area offices are responsible for the receipt, processing, and approval of APDs. The APDs are to be submitted by oil and gas operators pursuant to the requirements found in Onshore Oil and Gas Order No. 1 — Approval of Operations on Onshore Federal and Indian Oil and Gas Leases (Circular No. 2538). Additional requirements for the conduct of oil and gas operations on federal oil and gas leases can be found in Code of Federal Regulations Title 43, Part 3160. Copies of Onshore Oil and Gas Order No. 1, and pertinent regulations, can be obtained from the BLM district offices in which the operations are proposed. Early coordination with these offices on proposals is encouraged.

CULTURAL AND PALEONTOLOGICAL RESOURCES—The SMA is responsible for assuring that the leased lands are examined to determine if cultural resources are present and to specify mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator, unless notified to the contrary by the SMA, shall:

1. Contact the appropriate SMA to determine if a site-specific cultural resource inventory is required. If an inventory is required, then;
2. Engage the services of a cultural resource specialist acceptable to the SMA to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the area of proposed disturbance to cover possible site relocation which may result from environmental or other considerations. An acceptable inventory report is to be submitted to the SMA for review and approval no later than that time when an otherwise complete application for approval of drilling or subsequent surface-disturbing operation is submitted.
3. Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as testing salvage and recordation. Where impacts to cultural resources cannot be mitigated to the satisfaction of the SMA, surface occupancy on that area must be prohibited.

The lessee or operator shall immediately bring to the attention of the SMA any cultural or paleontological resources discovered as a result of approved operations under this lease, and not disturb such discoveries until directed to proceed by the SMA.

ENDANGERED OR THREATENED SPECIES—The SMA is responsible for assuring that the leased land is examined prior to undertaking any surface-disturbing activities to determine effects upon any plant or animal species, listed or proposed for listing as endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operator's plans or even disallow use and occupancy that would be in violation of the Endangered Species Act of 1973 by detrimentally affecting endangered or threatened species or their habitats.

The lessee/operator may, unless notified by the authorized officer of the SMA that the examination is not necessary, conduct the examination on the leased lands at his discretion and cost. This examination must be done by or under the supervision of a qualified resources specialist approved by the SMA. An acceptable report must be provided to the SMA identifying the anticipated effects of a proposed action on endangered or threatened species or their habitats.

This lease is within known golden eagle habitat. A biological assessment of the area may be necessary which could significantly delay processing of an APD. The lessee/operator should allow sufficient lead time to conduct a biological assessment should one be needed.

APPENDIX C-2 — SPECIAL LEASE STIPULATIONS AND LEASING RESTRICTIONS

The following stipulations only apply to mineral-related activities in the planning area. **These stipulations represent mitigation measures necessary to avoid or minimize adverse impacts to the human environment (40 CFR 1502.14(f) and 1502.16(h)). Most of the area included under the stipulations involves split estate. In the case of split estate the stipulations do not dictate surface management on private lands but are intended only to provide required protection of important resources that otherwise may be impacted by federal actions.**

The areas of federal oil and gas covered by the following stipulations are portrayed in Map K-1 of the draft. At APD time, negotiations between the surface owner, operator, and BLM may be undertaken to incorporate specific needs of the surface owner. This may result in small adjustments to buffer zones, for example, where adequate protection can be provided without strict adherence to specific distances set forth in the stipulations.

If these special stipulations are not effective in providing the desired degree of resource protection, they may be revised at a future date.

The NSO acreages listed below under Alternative C are approximate totals as of December 1986. They are provided only to give perspective to the possible extent of NSO stipulations at one point in time. Changes in these totals will continually occur as resources change. Other acreages listed under Alternatives C and D are the maximum totals theoretically possible.

Definition

Surface Occupancy — Occupancy of the land surface with pumps, drilling rigs, tank batteries, roads and other facilities that require repeated visits or maintenance.

Exceptions (may be applied to any stipulation **except Threatened and Endangered Species**)

These limitations do not apply to maintenance and operation of producing wells. This stipulation may be waived or reduced if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts. Exceptions to this limitation in any particular year may be specifically approved in writing by the authorized officer. **In all cases the stipulation (including any modification) will be designed to present the least restrictive measure for avoiding unacceptable adverse impacts.**

Stipulations and Leasing Restrictions

Threatened and Endangered Species

(All Alternatives)

The Surface Management Agency is responsible for assuring that the leased land is examined prior to undertaking any surface-disturbing activities to determine effects upon any plant or animal species, listed or proposed for listing as

endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operator's plans or even disallow use and occupancy that would be in violation of the Endangered Species act of 1973 by detrimentally affecting endangered or threatened species or their habitats.

The lessee/operator shall, unless notified by the authorized officer of the Surface Management Agency that the examination is not necessary, conduct the examination on the leased lands at his cost. This examination must be done by or under the supervision of a qualified resources specialist approved by the Surface Management Agency. An acceptable report must be provided to the Surface Management Agency, identifying the anticipated effects of a proposed action on endangered or threatened species or their habitats.

Elk Winter Range (No elk winter range has been identified as of this date. Stipulation will apply if and when such habitat is identified.)

(Alternative C)

No seismic exploration, construction, or other development would be allowed on elk winter range between November 30 and May 1.

(Alternative D)

No leasing would be allowed on elk winter range.

Elk Calving (No elk calving habitat has been identified as of this date. Stipulation will apply if and when such habitat is identified.)

(Alternative C)

No seismic exploration, construction, or other development would be allowed on elk calving range between June 1 and July 1.

(Alternative D)

No leasing would be allowed on elk calving range.

Sage Grouse

(Alternative C)

NSO would be allowed within 200 feet of strutting grounds **(40 acres)**.

No seismic exploration, construction, or other development would be allowed within two miles of strutting grounds between March 1 and June 30 **(up to 48,705 acres)**.

(Alternative D) (up to 48,705 acres)

No leasing would be allowed within two miles of sage grouse strutting grounds.

Wetlands

(Alternative A) (282 acres)

NSO would be allowed to protect wetlands from possible pollution.

(Alternatives C, D) (up to 57,355 acres)

NSO would be allowed within 200 feet of wetlands, lakes and ponds.

No seismic exploration would be allowed within 500 feet of waterfowl nesting habitat between March 1 and July 1.

Ferruginous Hawk

(Alternative C)

NSO would be allowed within one-half mile of ferruginous hawk nests known to be occupied at least once within the seven previous years (**1200 acres**).

No seismic exploration, construction, or other development would be allowed within 1.2 miles of occupied nests between **March 15** and July 15 (**up to 55,005 acres**).

(Alternative D) (**up to 55,005 acres**)

No leasing would be allowed within 1.2 miles of ferruginous hawk nest sites known to be occupied at least once within the seven previous years.

Prairie Falcon

(Alternative C)

NSO would be allowed within one-half mile of prairie falcon nests known to be occupied at least once within the seven previous years (**5200 acres**).

No construction, seismic exploration, or other development would be allowed within one-half mile of occupied nests between March 15 and July 15 (**up to 90,205 acres**).

(Alternative D) (**up to 90,205 acres**)

No leasing would be allowed within one-half mile of prairie falcon nests known to be occupied at least once within the seven previous years.

Golden Eagles

(Alternative C)

NSO would be allowed within one-half mile of golden eagle nests known to be occupied at least once within the seven previous years (**3600 acres**).

No construction, seismic exploration, or other development would be allowed within one-half mile of occupied nests between February 15 and July 15 (**up to 90,205 acres**).

(Alternative D) (**up to 90,205 acres**)

No leasing would be allowed within one-half mile of golden eagle nests known to be occupied at least once within the seven previous years.

Riparian Habitat (up to 151,957 acres)

(Alternative C)

No disturbance of riparian areas of wetlands, intermittent, ephemeral, or perennial streams and rivers would be allowed except for essential road and utility crossings.

(Alternative D)

No disturbance of riparian areas would be allowed.

Bighorn Sheep

Bighorn Sheep Winter Range (No bighorn sheep winter range has been identified as of this date. Stipulation will apply if and when such habitat is identified.)

(Alternative C)

No construction, seismic exploration, or other development would be allowed on bighorn sheep winter range between December 1 and April 1.

(Alternative D)

No leasing would be allowed on bighorn sheep winter range.

Bighorn Sheep Lambing (No bighorn sheep lambing habitat has been identified as of this date. Stipulation will apply if and when such habitat is identified.)

(Alternative C)

No construction, seismic exploration, or other development would be allowed in bighorn sheep lambing habitat between April 1 and June 15.

(Alternative D)

No leasing would be allowed in bighorn sheep lambing habitat.

Prairie Dog Towns (up to 4,520 acres)

(Alternatives A, B, C, D)

A black-footed ferret inventory may be required prior to any development. (See Threatened and Endangered species stipulation).

Fort Union Historic Site

(Alternative C) (**380 acres**)

If visual impacts of oil and gas development cannot be satisfactorily avoided or mitigated, NSO would be allowed within the visible area within a 3.5 mile radius of the Fort Union Historic Site.

(Alternative D) (**380 acres**)

No leasing would be allowed within a 3.5 mile radius of the Fort Union Historic Site.

Off-Road Vehicles

(Alternative C)

Between March 1 and June 1 travel will be restricted to maintained roads in the Big Gumbo Area. Exceptions will be allowed for emergency uses if approved by the authorized officer.

(Alternative D)

Travel will be restricted to maintained roads and major trails in the Big Gumbo Area. During the period between March 1 and June 1 travel will be restricted to maintained roads only. No exceptions will be allowed.

Floodplains

(Alternatives A, C, and D) (**694.41 acres**)

NSO would be allowed to protect the floodplain of the Missouri River from possible pollution.

Native Prairie

(Alternative A) (**120.00 acres**)

NSO would be allowed to preserve the native prairie ecosystem.

APPENDIX D

LAND PATTERN ADJUSTMENT CRITERIA AND INITIAL CATEGORIZATION

This appendix presents general guidance for the land pattern adjustment program, specific criteria used to assess the manageability and resource values of individual tracts, and an initial categorization of tracts for retention or disposal under each alternative (Tables D-1 and D-2).

General Program Guidance

The following criteria are based on objectives and criteria presented in the 1984 supplement to the Montana BLM State Director's Guidance — Land Pattern Review and Land Adjustment. These objectives and criteria are used, to varying extents, as general guidance under all alternatives.

Objectives of Land Pattern Adjustment

Land pattern adjustment decisions will be made after thorough analysis and study of land use potential and should achieve the following long-term objectives:

1. To retain those public lands having significant public values; acquire (by exchange) other lands which will contribute significantly to accomplishing public land management objectives.
2. To adjust the BLM land pattern to get the highest public value.
3. To identify and transfer those public lands which could attain a higher and better use in the private sector or if managed by another public agency **as soon as possible**.

Retention Criteria

Manageable lands containing the following values will be retained:

1. Wetlands and riparian areas determined to come under the definition of EO 11990.
2. Areas of national economic significance such as designated mineral resource areas where the disposal of the surface would interfere with the logical development of the mineral estate.
3. Areas where management is cost-effective or lands containing other important characteristics and public values which can best be managed in public ownership by BLM, including but not limited to:
 - a. strategic tracts along rivers, streams, lakes, ponds, springs, and trails;
 - b. important hunting or fishing areas;
 - c. recreation sites and areas;
4. Lands with a combination of broad multiple-use values.
5. Areas where future plans will lead to further consolidation and improvement of land patterns and reduce the costs of management.

6. Public lands withdrawn by the BLM for which the purpose of the withdrawal remains valid and the resource uses can be managed by BLM concurrently.

7. Public lands which provide public access and contain previously mentioned public values which, when considered together, warrant their retention.

Disposal Criteria

Disposal decisions will be made in the public interest based upon the following criteria:

1. Lands specifically identified through land use plans for sale, exchange, transfer or R & PP Act applications.
2. Lands of limited public value.
3. Widely scattered parcels which are difficult for BLM to manage with anything beyond minimal custodial administration.
4. Lands with high public values proper for management by other federal agencies, or state or local government.
5. Lands which will service important public objectives (such as community expansion) if outside of BLM administration.
6. Lands where disposal would aid in aggregating or repositioning other public lands or public land resource values in retention areas to facilitate national, state, and local objectives.
7. Lands with long-term unauthorized use problems, and which are not required for specific public purposes.
8. Lands where disposal would increase the range of economic opportunities provided to the general public.
9. Lands in which the highest value or most appropriate long-term use is agriculture, or commercial or industrial development.
10. Lands involved in BLM/USFS jurisdictional transfer and ongoing exchanges.

Selection Criteria

All acquisition proposals will be evaluated to determine if the selected lands would:

1. Facilitate access to areas retained for long-term public use.
2. Enhance congressionally designated areas, rivers, or trails.
3. Facilitate national, state and local BLM priorities or mission statement needs.
4. Facilitate implementation and/or be consistent with BLM land use and activity plans.
5. Stabilize or enhance local economies or values.
6. Meet long-term public land management goals.

7. Be of sufficient size to improve use of adjoining public lands or, if isolated, large enough to allow the identified potential public land use.
8. Allow more diverse use, more intensive use, or a change in uses to better fulfill the Bureau's mission.
9. Maintain or enhance important and recognized public land values. Especially noteworthy are identified, designated, special, or high interest areas, or values identified in State Comprehensive Outdoor Recreation Plans.
10. Enhance the opportunity for new or emerging public land uses or values.
11. To contribute to a wide spectrum of uses or a large number of public land users.
12. To facilitate management practices, uses, scale of operations or degrees of management intensity that are viable under economic program efficiency standards.
13. To secure for the public significant water-related land interests. These interests include lake shore, river front, stream, pond, or spring sites.

Site-Specific Evaluation Criteria

All proposed disposal and acquisition actions will be subject to a detailed environmental analysis prior to a final decision. In addition to meeting the general objectives and criteria presented above, each disposal or acquisition will be measured against the site-specific criteria presented below. The criteria include both manageability and resource quality factors. The criteria are grouped according to the relative importance an individual criterion would have in the decision-making process.

High Relative Weight

Lands are in close proximity (eg., within 150 miles) to the Dickinson District Office.

Lands are in close proximity (eg., within 25 miles) to known retention lands.

Parcels or contiguous parcels are large enough to manage effectively (eg., 320 acres or larger).

Potential exists for intensive management through activity planning (eg., AMP, HMP, Watershed Management Plan (WMP), etc.).

There is a willing party for sale or exchange.

There is potential for unauthorized use to continue undetected given present funding and staffing (negative factor).

Lack of management opportunities due to movement of river channels and periodic flooding (negative factor).

Lands contain high quality riparian vegetation which could be destroyed if transferred from public ownership.

Lands are located along Little Missouri River, Missouri River, or major tributary.

Lands contain threatened or endangered wildlife species habitat.

Rare **plant and animal populations and exemplary natural communities** of high interest to the state are present.

Lands provide legal access to other public use areas.

Lands contain noxious weeds (negative factor).

Moderate Relative Weight

Lands are located in 100 year floodplain.

Lands contain wetlands which serve as ground water recharge areas and have potential to be drained if disposed.

Lands with high potential for mineral materials development.

Lands are located within a CSA or coal lease.

Lands contain high quality woody vegetation which could be lost if disposed.

Lands contain high quality native prairie which could be lost if disposed.

Lands serve as high value wildlife habitat because of surrounding agriculturally disturbed lands.

Lands possess value for reduction of sediment or other pollutants which could be lost if disposed. Lands contain cultural resources eligible or potentially eligible for the NRHP.

Lands contain vertebrate fossils of significant scientific interest.

Lands are located less than 50 miles from city having population greater than 500 persons.

Lands have legal access.

Lands have legal and physical access.

Low Relative Weight

Lands are presently leased or there is an opportunity for issuing a grazing lease.

There is an opportunity to eliminate all public lands in the county (negative factor).

Lands contain authorized range improvements.

Lands are inundated by water (negative factor).

Initial Categorization

Initial categorization of all public lands were completed for all alternatives (Tables D-1 and D-2). These categorizations were based on the general program guidance and site-specific criteria presented above, in combination with the alternative-specific goals, objectives, and actions presented in Chapter Two. Initial categorizations may change as a result of new information found during field examination and environmental analysis. Under Alternative A — No Action, the classifications were determined in previous planning efforts and may not fully reflect the general program guidance or site-specific criteria. No lands were preliminarily identified for disposal in Alternative D; however, individual outside applications would be considered on a case-by-case basis using the appropriate site-specific criteria.

TABLE D-1
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
<i>COUNTY: Adams</i>								
129 N.	91 W.	5	NESE	40.00	D	D	D	R
TOTAL ACREAGE				40.00				
<i>COUNTY: Barnes</i>								
143 N.	60 W.	12	Lot 1	2.29	R	D	D ⁴⁶	R
			Lot 2	2.27	R	D	D ⁴⁶	R
TOTAL ACREAGE				4.56				
<i>COUNTY: Benson</i>								
151 N.	62 W.	34	SWNE	40.00	R	D	D ⁴	R
			SWNW	40.00	R	D	D ⁴	R
151 N.	65 W.	35	Lot 1	5.30	R	D	D ⁴	R
151 N.	67 W.	13	Lot 2	4.14	R	D	D	R
TOTAL ACREAGE				89.44				
<i>COUNTY: Billings</i>								
141 N.	101 W.	10	All	640.00	D	D	D ⁵	R
		18	SESE	40.00	D	D	D	R
TOTAL ACREAGE				680.00				
<i>COUNTY: Bottineau</i>								
162 N.	74 W.	7	Lot 6	0.05	R	D	D ⁴	R
TOTAL ACREAGE				0.05				
<i>COUNTY: Bowman</i>								
131 N.	103 W.	34	NENW	40.00	R	D	D	R
			NWSW	40.00	D	D	D	R
		35	SENE	40.00	D	D	D	R
129 N.	104 W.	31	Lot 1	39.82	R	D	D	R
			Lot 3	39.92	R	D	D	R
			Lot 4	39.98	R	D	D	R
		32	SWSW	40.00	D	D	D	R
130 N.	104 W.	18	Lot 4	37.53	R	D	D	R
129 N.	105 W.	1	W2SW	80.00	R	D	R	R
		2	Lot 1	40.05	R	D	R	R
			Lot 2	40.07	R	D	R	R
			Lot 3	40.09	R	D	R	R
			Lot 4	40.11	R	D	R	R
			S2NE	80.00	R	D	R	R
			E2SE	80.00	R	D	R	R
		5	SENE	40.00	D	D	D	R
			SWSW	40.00	D	D	D	R
			SESE	40.00	D	D	D	R
		6	Lot 4	39.47	D	D	D	R
			Lot 5	39.48	D	D	D	R
			Lot 7	39.54	D	D	D	R
		8	NWNE	40.00	D	D	D	R
			N2NW	80.00	D	D	D	R
			SENE	40.00	D	D	D	R
		11	N2NE	80.00	R	D	R	R
		12	N2NW	80.00	R	D	R	R
			SWNW	40.00	R	D	R	R
		14	NWNE	40.00	R	D	D	R
			E2NW	80.00	R	D	D	R
			SWNW	40.00	R	D	D	R
			NESW	40.00	R	D	D	R
		15	NENE	40.00	D	D	D	R
		23	SESE	40.00	D	D	D	R
		24	SWNE	40.00	R	D	D	R
			NWNW	40.00	D	D	D	R
			SWSE	40.00	R	D	D	R
		25	N2NW	80.00	D	D	D	R
		26	NENE	40.00	D	D	D	R
		29	NENW	40.00	D	D	D	R
		35	S2SE	80.00	D	D	D	R

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
130 N.	105 W.	11	SENW	40.00	D	D	D	R
			E2SW	80.00	D	D	D	R
		13	S2SE	80.00	R	D	D	R
			Lot 1	38.64	R	D	D	R
		19	Lot 4	38.92	R	D	D	R
			NENW	40.00	D	D	D	R
		24	SESW	40.00	D	D	D	R
			N2NE	80.00	R	D	D	R
		30	NENW	40.00	R	D	D	R
			NWNE	40.00	D	D	D	R
		31	S2NE	80.00	D	D	D	R
			Lot 4	39.41	D	D	D	R
		32	SWNE	40.00	D	D	D	R
			SESW	40.00	D	D	D	R
		33	S2SE	80.00	D	D	D	R
			SWNW	40.00	D	D	D	R
		34	NESW	40.00	D	D	D	R
			SWSW	40.00	D	D	D	R
		35	SESE	40.00	D	D	D	R
			E2NE	80.00	D	D	D	R
		36	NESE	40.00	R	D	R	R
			S2NW	80.00	R	D	R	R
		37	SW	160.00	R	D	R	R
			W2SE	80.00	R	D	R	R
131 N.	105 W.	4	Lot 1	40.00	R	D	R ³	R
			Lot 2	40.02	R	D	R ³	R
		5	Lot 3	40.02	R	D	R ³	R
			Lot 4	40.04	R	D	R ³	R
		6	SENE	40.00	R	D	R ³	R
			E2SW	80.00	R	D	R ³	R
		7	SWSW	40.00	R	D	R ³	R
			SE	160.00	R	D	R ³	R
		8	N2NW	80.00	R	D	D	R
			SWNW	40.00	R	D	D	R
		9	N2SW	80.00	D	D	D	R
			SENE	40.00	D	D	D	R
		10	S2SE	80.00	D	D	D	R
			SWNE	40.00	D	D	D	R
		11	W2NW	80.00	D	D	D	R
			SESW	40.00	D	D	D	R
		12	S2SE	80.00	D	D	D	R
			SWNW	40.00	D	D	D	R
		13	Lot 3	15.68	D	D	R ³	R
			Lot 5	37.10	R	D	R ³	R
		14	Lot 1	24.40	R	D	R ³	R
			Lot 6	39.30	R	D	R ³	R
		15	Lot 9	1.44	R	D	R ³	R
			NE	160.00	D	D	D	R
		16	NENW	40.00	D	D	D	R
			N2SE	80.00	D	D	D	R
132 N.	105 W.	6	Lot 1	22.45	D	D	D	R
			Lot 2	22.41	D	D	D	R
		7	Lot 3	22.38	D	D	D	R
			Lot 4	18.47	D	D	D	R
		8	All	640.00	R	D	R ³	R
			W2NW	80.00	D	D	R ³	R
		9	S2SW	80.00	D	D	R ³	R
			SENE	40.00	D	D	R ³	R
		10	N2	320.00	R	D	R ³	R
			SWSW	40.00	R	D	R ³	R
		11	E2SE	80.00	R	D	R ³	R
			SWSE	40.00	R	D	R ³	R
		12	S2NW	80.00	D	D	R ³	R
			SW	160.00	D	D	R ³	R
132 N.	105 W.	13	W2SE	80.00	D	D	R ³	R

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
129 N.	106 W.	3	SENW	40.00	D	D	R ¹	R
			NESW	40.00	D	D	R ³	R
			S2SW	80.00	D	D	R ¹	R
		4	Lot 5	21.58	D	D	R ¹	R
			Lot 6	29.70	R	D	R ¹	R
			Lot 7	31.00	R	D	R ³	R
		5	Lot 4	40.40	R	R	R	R
			Lot 5	33.60	R	R	R	R
			Lot 10	19.00	R	R	R	R
			W2SW	80.00	R	R	R	R
			SESW	40.00	R	R	R	R
			All	634.40	R	R	R	R
		6	Lot 1	38.75	R	R	R	R
			Lot 2	38.81	R	R	R	R
			Lot 3	38.87	R	R	R	R
			W2NE	80.00	R	R	R	R
			E2NW	80.00	R	R	R	R
			E2SW	80.00	R	R	R	R
		11	SE	160.00	R	R	R	R
			N2NE	80.00	D	D	D	R
			SENE	40.00	D	D	D	R
		12	NWNW	40.00	D	D	D	R
			Lot 1	34.50	D	D	R ¹	R
			Lot 2	14.80	R	D	R ¹	R
			NENE	40.00	R	D	R ¹	R
			E2SE	80.00	D	D	R ¹	R
			Lot 2	39.05	R	R	R ¹	R
		18	Lot 3	39.11	D	D	R ¹	R
			NENE	40.00	D	D	R	R
			NESW	40.00	D	D	R ¹	R
		19	Lot 4	39.41	D	D	R ¹	R
			S2NW	80.00	D	D	R ¹	R
			Lot 7	14.56	D	D	R ¹	R
		20	NWSW	40.00	R	D	R ¹	R
			E2NE	80.00	D	D	R ¹	R
			SENE	40.00	D	D	D	R
		21	SESW	40.00	D	D	D	R
			Lot 3	27.60	R	D	R ¹	R
			Lot 4	36.30	R	D	R ¹	R
		22	Lot 13	19.50	R	D	R ¹	R
			Lot 15	12.40	R	D	R ¹	R
			Lot 1	39.47	D	D	R ¹	R
		30	Lot 3	38.10	R	D	R ¹	R
			W2NW	80.00	R	D	R ¹	R
			W2SW	80.00	R	D	R ¹	R
130 N.	106 W.	2	Lot 11	29.90	R	D	R ¹	R
			Lot 4	40.00	R	R	R	R
			S2NW	80.00	R	R	R	R
			SW	160.00	R	R	R	R
			W2SE	80.00	R	R	R	R
			SESE	40.00	R	R	R	R
		5	NW	160.06	R	R	R	R
			All	626.39	R	R	R	R
			All	627.76	R	R	R	R
		6	S2	320.00	R	R	R	R
			N2NE	80.00	R	R	R	R
			SWNE	40.00	R	R	R	R
		7	W2	320.00	R	R	R	R
			W2SE	80.00	R	R	R	R
			SESE	40.00	R	R	R	R
		17	All	640.00	R	R	R	R
			All	629.20	R	R	R	R
			All	630.56	R	R	R	R
		18	Lot 1	28.00	R	R	R	R
			Lot 2	3.00	R	R	R	R
			N2	320.00	R	R	R	R

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
131 N.	106 W.		SW	160.00	R	R	R	R
			N2SE	80.00	R	R	R	R
			SWSE	40.00	R	R	R	R
		21	NWNW	40.00	R	R	R	R
		28	Lot 11	1.74	R	R	R	R
			Lot 3	4.15	R	R	R	R
		29	W2	320.00	R	R	R	R
		30	All	631.92	R	R	R	R
		31	All	633.12	R	R	R	R
		32	Lot 4	15.75	R	R	R ¹	R
			W2	311.00	R	D	R	R
		6	Lot 4	36.02	D	D	R ¹	R
		13	Lot 8	24.30	R	D	R ¹	R
			Lot 9	26.00	R	D	R ¹	R
			NESE	40.00	D	D	R ¹	R
		14	Lot 2	0.56	R	D	R ¹	R
		23	Lot 1	8.25	R	D	R	R
			Lot 4	35.80	D	D	R	R
			NENW	40.00	R	D	R	R
			SESE	40.00	R	D	R	R
			Lot 5	15.00	D	D	R	R
			Lot 6	31.75	R	D	R	R
		25	SWNE	40.00	R	D	R ¹	R
			Lot 2	27.60	R	D	R	R
			Lot 3	20.00	R	D	R	R
			W2NW	80.00	R	D	R	R
		26	W2SW	80.00	R	D	R	R
			SESW	40.00	R	D	R	R
			NE	160.00	R	D	R	R
			E2NW	80.00	R	D	R	R
			NESW	40.00	R	D	R	R
			S2NWSW	20.00	R	R	R	R
			S2SW	80.00	R	D	R	R
			W2SE	80.00	R	D	R	R
		27	E2SE	80.00	R	D	R	R
			SESE	40.00	R	D	R	R
			W2E2	160.00	R	R	R	R
			NESE	40.00	R	R	R	R
		31	All	625.44	R	D	R	R
132 N.	106 W.	12	N2N2	160.00	D	D	R ¹	R
		28	NWSW	40.00	D	D	D	R
			NESE	40.00	D	D	D	R
129 N.	107 W.	1	S2S2	160.00	R	R	R	R
		2	Lot 3	40.07	R	R	R ¹	R
		12	N2N2	160.00	R	R	R	R
			SENE	40.00	R	R	R	R
			SWSW	40.00	D	D	R ¹	R
			NESE	40.00	R	R	R	R
		13	NWNE	40.00	D	D	R ¹	R
			N2NW	80.00	D	D	R ¹	R
			NESE	40.00	D	D	R ¹	R
			E2SE	80.00	D	D	R ¹	R
		24	SWSE	40.00	D	D	R ¹	R
			Lot 4	51.10	D	D	R ¹	R
130 N.	107 W.	1	All	639.84	R	R	R	R
		2	All	639.84	R	R	R	R
		3	All	373.04	R	R	R	R
		10	All	373.20	R	R	R	R
		11	All	640.00	R	R	R	R
		12	All	640.00	R	R	R	R
		13	All	640.00	R	R	R	R
		14	All	640.00	R	R	R	R
		15	All	375.64	R	R	R	R
		22	All	378.68	R	R	R	R
		23	All	640.00	R	R	R	R

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
131 N.	107 W.	24	All	640.00	R	R	R	R
		25	All	640.00	R	R	R	R
		26	N2	320.00	R	R	R	R
			NESW	40.00	R	R	R	R
			SE	160.00	R	R	R	R
		27	N2	191.15	R	R	R	R
		35	NENE	40.00	R	R	R	R
		2	NW	159.90	D	D	R ³	R
		10	All	363.54	R	R	R	R
		14	W2	320.00	R	R	R	R
		15	All	364.32	R	R	R	R
		22	All	367.00	R	R	R	R
		23	All	640.00	R	R	R	R
		24	SW	160.00	R	R	R	R
		25	W2	320.00	R	R	R	R
		26	All	640.00	R	R	R	R
		27	All	369.40	R	R	R	R
		34	All	372.00	R	R	R	R
		35	All	640.00	R	R	R	R
132 N.	107 W.	26	NENE	40.00	D	D	D	R
			SW	160.00	D	D	D	R
			S2SE	80.00	D	D	D	R
TOTAL ACREAGE				32,579.64				
COUNTY: Burleigh								
142 N.	75 W.	12	S2SW	80.00	R	D	D ⁵⁶	R
		14	S2SW	80.00	R	D	D ⁵⁶	R
			E2SE	80.00	R	D	D ⁵⁶	R
		22	N2NE	80.00	R	D	D ⁵⁶	R
		26	NWNE	40.00	R	D	D ⁵⁶	R
			NENW	40.00	R	D	D ⁵⁶	R
144 N.	77 W.	22	NE	160.00	R	D	D ⁶	R
137 N.	79 W.	19	Tract 39	26.76	R	D	D ²	R
		33	Lot 1	9.30	R	D	D ²	R
137 N.	80 W.	14	Lot 2	35.50	R	D	D ²	R
139 N.	81 W.	4	Lot 1	3.70	R	D	D ²	R
141 N.	81 W.	24	Lot 4	46.50	R	D	D ²	R
		26	Lot 1	28.20	R	D	D ²	R
			Lot 2	53.40	R	D	D ²	R
			NESE	40.00	R	D	D ²	R
			SWSE	40.00	R	D	D ²	R
		142 N.	81 W.	4	Lot 4	19.60	R	D
TOTAL ACREAGE				862.96				
COUNTY: Cavalier								
162 N.	58 W.	9	NWNE	40.00	R	D	D ⁵	R
163 N.	58 W.	6	Lot 2	39.64	R	D	D ⁵	R
			Lot 3	39.80	R	D	D ⁵	R
			SWNE	40.00	R	D	D ⁵	R
		25	SENE	40.00	R	D	D ⁵	R
164 N.	59 W.	35	NENE	40.00	R	D	D ⁵	R
TOTAL ACREAGE				239.44				
COUNTY: Divide								
163 N.	95 W.	25	SWSW	40.00	R	D	D ⁴⁶	R
		26	SESE	40.00	R	D	D ⁴⁶	R
		27	SWSE	40.00	R	D	D ⁶	R
160 N.	99 W.	5	SWSE	40.00	R	D	D ⁴⁶	R
160 N.	100 W.	22	SWNE	40.00	R	D	D ⁴⁶	R
			NWSE	40.00	R	D	D ⁴⁶	R

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
162 N.	102 W.	8	SWNW	40.00	R	D	D ⁵⁶	R
			N2SW	80.00	R	D	D ⁵⁶	R
		17	NENW	40.00	R	D	D ⁶	R
		20	SWNE	40.00	R	D	D ⁵⁶	R
			S2NW	80.00	R	D	D ⁵⁶	R
			SW	160.00	R	D	D ⁵⁶	R
		29	NW	160.00	R	D	D ⁵⁶	R
		30	SENE	40.00	R	D	D ⁵⁶	R
			NESE	40.00	R	D	D ⁵⁶	R
163 N.	102 W.	26	SENE	40.00	R	D	D ⁶	R
			SWNW	40.00	R	D	D ⁶	R
160 N.	103 W.	15	W2NW	80.00	D	D	D ⁶	R
			NWSW	40.00	D	D	D ⁶	R
		21	NENW	40.00	R	D	D ⁶	R
		33	Lot 1	60.80	R	D	D ⁶	R
161 N.	103 W.	23	NENE	40.00	R	D	D ⁶	R
			SESE	40.00	R	D	D ⁶	R
		24	SWSW	40.00	R	D	D ⁶	R
162 N.	103 W.	3	Lot 1	40.03	R	D	D ⁵⁶	R
			Lot 2	40.02	R	D	D ⁵⁶	R
			Lot 3	22.36	R	D	D ⁵⁶	R
			Lot 4	22.42	R	D	D ⁵⁶	R
			S2NE	80.00	R	D	D ⁵⁶	R
163 N.	103 W.	11	SESE	40.00	R	D	D ⁶	R
		14	S2SE	80.00	R	D	D ⁶	R
TOTAL ACREAGE				1665.63				
<i>COUNTY: Dunn</i>								
147 N.	94 W.	30	S2	305.16	D	D	D	R
147 N.	95 W.	2	SESW	40.00	R	D	D	R
		8	NWSE	40.00	R	D	D	R
			S2SE	80.00	R	D	D	R
		10	W2NW	80.00	R	D	D	R
			NWSW	40.00	R	D	D	R
148 N.	95 W.	4	Lot 6	38.22	R	D	R ³	R
		7	SESE	40.00	R	R	R	R
		8	N2	320.00	R	D	R ³	R
			S2SW	80.00	R	R	R	R
			SWSE	40.00	R	R	R	R
		9	Lot 1	38.18	R	D	R ³	R
			Lot 2	38.06	R	D	R ³	R
			Lot 3	37.94	R	D	R ³	R
			NWNW	40.00	R	D	R ³	R
			S2NW	80.00	R	D	R ³	R
			N2SW	80.00	R	D	R ³	R
		17	E2	320.00	R	R	R	R
			N2NW	80.00	R	R	R	R
			SENW	40.00	R	R	R	R
			SWSW	40.00	R	R	R	R
		18	Lot 2	43.62	R	D	R ³	R
			NENE	40.00	R	D	R ³	R
			E2SW	80.00	R	D	R ³	R
			NWSE	40.00	R	D	R ³	R
		19	SENE	40.00	R	R	R	R
		20	N2	320.00	R	R	R	R
			N2SW	80.00	R	R	R	R
			SESW	40.00	R	R	R	R
			SE	160.00	R	R	R	R
		21	Lot 1	36.96	R	R	R	R
			Lot 2	36.88	R	R	R	R
			Lot 3	36.80	R	R	R	R
			Lot 4	36.72	R	R	R	R
			W2	320.00	R	R	R	R

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
147 N.	96 W.	28	Lot 1	36.64	R	R	R	R
			Lot 2	36.56	R	R	R	R
		29	NW	160.00	R	R	R	R
			NWSW	40.00	R	R	R	R
			NE	160.00	R	R	R	R
			E2NW	80.00	R	R	R	R
		30	NESW	40.00	R	R	R	R
			N2SE	80.00	R	R	R	R
			Lot 1	43.97	R	D	R ³	R
			Lot 2	43.91	R	D	R ³	R
			Lot 3	43.85	R	D	R ³	R
			W2NE	80.00	R	D	R ³	R
			E2NW	80.00	R	D	R ³	R
			NESW	40.00	R	D	R ³	R
			NWSE	40.00	R	D	R ³	R
			S2NE	80.00	R	D	R ³	R
		4	E2E2	161.13	R	D	R ³	R
		6	SW	160.00	R	D	R ³	R
			Lot 3	40.29	R	D	R ³	R
		12	NE	161.19	R	D	R ³	R
			E2NW	80.00	R	D	D	R
			N2SE	80.00	R	D	D	R
148 N.	96 W.	1	SENW	40.00	R	D	R ³	R
		2	SWNE	40.00	R	D	R ³	R
			S2NW	80.00	R	D	R ³	R
			NESW	40.00	R	D	R ³	R
		3	NWSE	40.00	R	D	R ³	R
			Lot 1	25.62	R	D	R ³	R
			Lot 2	25.84	R	D	R ³	R
		5	NE	134.64	R	D	R ³	R
			NWSE	40.00	R	D	R ³	R
		6	Lot 2	27.24	R	D	R ³	R
			Lot 6	33.16	R	R	R	R
			Lot 7	9.50	R	R	R	R
			Lot 8	12.87	R	R	R	R
			SWNE	40.00	R	D	R ³	R
			NW	135.04	R	R	R	R
			NESW	40.00	R	R	R	R
		7	Lot 3	38.14	R	R	R	R
			Lot 4	0.80	R	R	R	R
			Lot 11	38.05	R	D	R ³	R
			SESW	40.00	R	D	R ³	R
		8	SENW	40.00	R	D	R ³	R
			NESW	40.00	R	D	R ³	R
			N2SE	80.00	R	D	R ³	R
		9	SWNW	40.00	R	D	R ³	R
			Lot 1	39.70	R	D	R ³	R
		17	Lot 2	27.20	R	D	R ³	R
			Lot 3	38.60	R	D	R ³	R
			Lot 4	44.70	R	D	R ³	R
			E2NE	80.00	R	D	R ³	R
		18	NWNE	40.00	R	D	R ³	R
			E2NW	80.00	R	D	R ³	R
		19	SENW	40.00	R	D	R ³	R
		21	Lot 5	34.60	R	D	R ³	R
			S2	320.00	R	D	R ³	R
		22	N2SW	80.00	R	D	R ³	R
			SWSW	40.00	R	D	R ³	R
		23	SWNE	40.00	R	D	R ³	R
			N2SE	80.00	R	D	R ³	R
		24	E2NE	80.00	R	D	R ³	R
		25	S2NE	80.00	R	D	R ³	R
		26	Lot 7	25.50	R	D	R ³	R
			Lot 9	47.50	R	D	R ³	R
		28	N2NW	80.00	R	D	R ³	R
			NESE	40.00	R	D	R ³	R

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
146 N.	97 W.	29	NENE	40.00	R	D	R ³	R
			W2SW	80.00	R	R	R	R
		30	SESE	40.00	R	D	R ³	R
			W2	300.80	R	R	R	R
		31	W2NE	80.00	R	R	R	R
			SE	160.00	R	R	R	R
			SENE	40.00	R	D	R ³	R
			NESW	40.00	R	D	R ³	R
		34	E2SE	80.00	R	D	R ³	R
			NWSE	40.00	R	D	R ³	R
			NWSW	40.00	R	D	R ³	R
		35	Lot 1	2.78	R	D	R ³	R
		4	SWSW	40.00	D	D	D	R
		28	NE	160.00	D	D	D	R
		30	W2NE	80.00	D	D	D	R
147 N.	97 W.	8	SESW	40.00	R	D	R ³	R
		18	Lot 1	38.66	R	D	R ³	R
			Lot 2	38.78	R	D	R ³	R
			Lot 4	39.02	R	D	R ³	R
			E2E2	160.00	R	D	R ³	R
		30	NENW	40.00	R	D	R ³	R
			Lot 1	38.84	R	D	D	R
			Lot 2	38.82	R	D	D	R
			NENW	40.00	R	D	D	R
		32	NESE	40.00	R	D	D	R
148 N.	97 W.	1	Lot 1	28.18	R	R	R	R
			Lot 2	28.06	R	R	R	R
			Lot 3	27.94	R	R	R	R
			Lot 4	27.47	R	R	R	R
			Lot 5	30.70	R	R	R	R
			S2NE	80.00	R	R	R	R
			SENW	40.00	R	R	R	R
			Lot 6	20.00	R	R	R	R
			Lot 7	44.00	R	R	R	R
			Lot 8	19.20	R	R	R	R
			Lot 11	31.50	R	R	R	R
			NESW	40.00	R	R	R	R
		2	Lot 1	4.50	R	R	R	R
			Lot 2	18.30	R	R	R	R
			Lot 3	36.50	R	R	R	R
			Lot 4	21.50	R	R	R	R
			Lot 5	3.00	R	R	R	R
			Lot 6	27.00	R	R	R	R
			Lot 7	21.45	R	R	R	R
			Lot 8	35.80	R	R	R	R
			Lot 9	48.00	R	R	R	R
			W2SW	80.00	R	R	R	R
		3	Lot 3	28.78	R	R	R	R
			Lot 4	28.75	R	R	R	R
			Lot 6	49.00	R	R	R	R
			Lot 8	33.20	R	R	R	R
		4	E2	292.26	R	R	R	R
			NESW	40.00	R	R	R	R
			Lot 1	24.00	R	R	R	R
			Lot 3	28.89	R	D	R ³	R
		5	Lot 4	28.85	R	D	R ³	R
			SWNW	40.00	R	D	R ³	R
			NWSW	40.00	R	D	R ³	R
			E2	297.98	R	D	R ³	R
		6	Lot 4	29.37	R	D	R ³	R
			Lot 1	29.51	R	D	R ³	R
			Lot 2	29.64	R	D	R ³	R
			Lot 3	29.77	R	D	R ³	R
			Lot 4	26.79	R	D	R ³	R
			Lot 5	35.87	R	D	R ³	R
			Lot 6	35.89	R	D	R ³	R
			SENW	40.00	R	D	R ³	R
		6	SWSE	40.00	R	D	R ³	R

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
		9	Lot 1	2.50	R	D	R ³	R
			Lot 2	27.00	R	D	R ³	R
		10	N2NE	80.00	R	R	R	R
			SENE	40.00	R	R	R	R
			NESE	40.00	R	R	R	R
		11	NWNW	40.00	R	R	R	R
			E2SE	80.00	R	R	R	R
		12	Lot 1	21.50	R	R	R	R
			Lot 2	8.05	R	R	R	R
			SW	160.00	R	R	R	R
			W2SE	80.00	R	R	R	R
		13	W2NE	80.00	R	R	R	R
			SENE	40.00	R	R	R	R
			NW	160.00	R	R	R	R
			S2	320.00	R	R	R	R
		14	E2	320.00	R	R	R	R
		15	Lot 4	22.50	R	D	R ³	R
			Lot 5	24.80	R	D	R ³	R
			Lot 10	35.50	R	D	R ³	R
			Lot 11	11.25	R	D	R ³	R
			Lot 12	10.00	R	D	R ³	R
		19	Lot 4	37.15	R	D	R ³	R
			SESW	40.00	R	D	R ³	R
			SWSE	40.00	R	D	R ³	R
		21	Lot 2	9.60	R	D	R ³	R
		22	Lot 2	23.60	R	D	R ³	R
		23	E2SW	80.00	R	R	R	R
			SE	160.00	R	R	R	R
		24	All	640.00	R	R	R	R
		25	W2	320.00	R	R	R	R
		26	N2NE	80.00	R	R	R	R
			SENE	40.00	R	R	R	R
			NENW	40.00	R	R	R	R
			S2SW	80.00	R	D	R ³	R
			E2SE	80.00	R	R	R	R
		27	E2	320.00	R	D	R ³	R
		28	Lot 1	26.80	R	D	R ³	R
			Lot 8	24.50	R	D	R ³	R
			SWNW	40.00	R	D	R ³	R
		29	S2NE	80.00	R	D	R ³	R
			E2SW	80.00	R	D	R ³	R
			N2SE	80.00	R	D	R ³	R
			SWSE	40.00	R	D	R ³	R
		30	Lot 2	37.27	R	D	R ³	R
			Lot 3	37.33	R	D	R ³	R
			Lot 4	37.41	R	D	R ³	R
			SESW	40.00	R	D	R ³	R
			SWSE	40.00	R	D	R ³	R
		31	Lot 6	48.25	R	D	R ³	R
			N2NE	80.00	R	D	R ³	R
			SWNE	40.00	R	D	R ³	R
			W2	326.68	R	D	R ³	R
			NWSE	40.00	R	D	R ³	R
		32	W2NE	80.00	R	D	R ³	R
			N2NW	80.00	R	D	R ³	R
		33	Lot 3	17.50	R	D	R ³	R
			Lot 6	29.80	R	D	R ³	R
			Lot 8	16.10	R	D	R ³	R
TOTAL ACREAGE				15,989.22				
COUNTY: Eddy								
149 N.	63 W.	27	Lot 1	10.82	R	D	D ⁵	R
150 N.	63 W.	14	Lot 1	2.78	R	D	D ⁴	R
		19	Lot 1	0.25	R	D	D	R
		26	NESW	40.00	R	D	D ⁴	R
TOTAL ACREAGE				53.85				

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
<i>COUNTY: Emmons</i>								
135 N.	74 W.	6	Lot 1	46.13	R	D	D ¹⁶	R
136 N.	74 W.	32	S2NE	80.00	R	D	D ¹⁶	R
			S2NW	80.00	R	D	D ¹⁶	R
			S2	320.00	R	D	D ¹⁶	R
135 N.	77 W.	30	NENE	40.00	R	D	D	R
134 N.	78 W.	5	Lot 6	12.83	R	D	D	R
		7	Lot 10	17.80	R	D	D	R
135 N.	78 W.	33	Lot 2	2.49	R	D	D	R
TOTAL ACREAGE				599.25				
<i>COUNTY: Golden Valley</i>								
142 N.	103 W.	32	SENE	40.00	R	D	D	R
144 N.	103 W.	4	Lot 1	31.75	R	D	D ⁵	R
			Lot 2	32.05	R	D	D ⁵	R
			Lot 3	32.35	R	D	D ⁵	R
			Lot 4	32.65	R	D	D ⁵	R
			Lot 5	40.00	R	D	D ⁵	R
			Lot 6	40.00	R	D	D ⁵	R
			Lot 7	40.00	R	D	D ⁵	R
			Lot 8	40.00	R	D	D ⁵	R
			S2SW	80.00	R	D	D ⁵	R
			SE	160.00	R	D	D ⁵	R
		6	Lot 1	33.76	R	D	D ⁵	R
			Lot 2	34.80	R	D	D ⁵	R
			Lot 7	40.00	R	D	D ⁵	R
			Lot 8	40.00	R	D	D	R
			Lot 9	40.00	R	D	D	R
			Lot 10	40.00	R	D	D	R
			Lot 11	40.00	R	D	D ⁵	R
			SE	160.00	R	D	D ⁵	R
		8	NWNE	40.00	R	D	D	R
			NW	160.00	R	D	D	R
			N2SW	80.00	R	D	D	R
			SWSW	40.00	R	D	D	R
		18	Lot 1	26.35	R	D	D	R
			Lot 2	26.57	R	D	D	R
			NE	160.00	R	D	D	R
			NESE	40.00	R	D	D	R
			S2SE	80.00	R	D	D	R
		20	E2E2	160.00	R	D	D	R
		32	NWNW	40.00	R	D	D	R
			E2SW	80.00	R	D	D	R
139 N.	104 W.	30	Lot 2	37.15	R	D	D	R
144 N.	104 W.	2	Lot 2	37.06	R	D	D	R
			Lot 3	36.86	R	D	D	R
			Lot 4	36.66	R	D	D	R
			Lot 5	40.00	R	D	D	R
			Lot 6	40.00	R	D	D	R
			Lot 12	40.00	R	D	D	R
143 N.	105 W.	4	SESE	40.00	R	D	D	R
		18	SESE	40.00	R	D	D	R
		20	E2NE	80.00	R	D	D	R
TOTAL ACREAGE				2358.01				
<i>COUNTY: Grand Forks</i>								
151 N.	52 W.	13	SESW	40.00	R	D	D ⁵	R
TOTAL ACREAGE				40.00				
<i>COUNTY: Grant</i>								
131 N.	84 W.	30	Lot 14	0.87	D	D	D	R
		2	Lot 10	7.85	D	D	D	R
130 N.	85 W.	10	Lot 1	2.80	D	D	D	R
			Lot 2	2.10	D	D	D	R

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
130 N.	86 W.	26	Lot 1	7.96	D	D	D	R
		30	Lot 2	38.28	D	D	D ⁵	R
131 N.	86 W.	22	E2SW	80.00	D	D	D ⁵	R
			SE	160.00	D	D	D ⁵	R
134 N.	86 W.	4	S2SW	80.00	D	D	D ⁵	R
135 N.	86 W.	34	NWNW	40.00	D	D	D	R
129 N.	87 W.	8	Lot 1	1.20	D	D	D	R
		9	Lot 2	0.08	D	D	D	R
132 N.	87 W.	32	N2NW	80.00	D	D	D ⁵	R
132 N.	88 W.	24	SENE	40.00	D	D	D ⁵	R
134 N.	88 W.	30	Lot 1	0.61	D	D	D	R
130 N.	89 W.	34	NWNE	40.00	D	D	D ⁵	R
130 N.	90 W.	27	Lot 4	0.50	D	D	D	R
		28	Lot 3	1.50	D	D	D ²	R
TOTAL ACREAGE				583.75				
COUNTY: Kidder								
139 N.	70 W.	10	Lot 4	7.54	R	D	D	R
144 N.	70 W.	28	SWSW	40.00	R	D	D	R
137 N.	71 W.	24	Lot 5	8.58	R	D	D ⁴⁵	R
140 N.	71 W.	6	SENE	40.00	R	D	D ⁴⁵⁶	R
			SE	160.00	R	D	D ⁴⁵⁶	R
144 N.	71 W.	28	Lot 3	15.50	R	D	D ⁴	R
138 N.	72 W.	4	NE	158.89	R	D	D ⁴⁵	R
			S2NW	80.00	R	D	D ⁴⁵	R
			SW	160.00	R	D	D ⁴⁵	R
		8	NENE	40.00	R	D	D ⁴⁵	R
		18	NW	156.32	R	D	D ⁴	R
140 N.	72 W.	14	Lot 1	32.00	R	D	D ⁴⁵	R
			Lot 2	36.80	R	D	D ⁴⁵	R
		22	SENE	40.00	R	D	D ⁴	R
			SE	160.00	R	D	D ⁴	R
141 N.	72 W.	22	Lot 1	25.20	R	D	D ⁴	R
142 N.	72 W.	34	NESE	40.00	R	D	D ⁴	R
143 N.	72 W.	4	Lot 5	0.22	R	D	D ⁴	R
		6	Lot 3	22.00	R	D	D ⁴	R
		28	Lot 3	2.48	R	D	D ⁴	R
138 N.	73 W.	12	NWNE	40.00	R	D	D ⁴	R
			SESE	40.00	R	D	D ⁴	R
		14	S2N2	160.00	R	D	D ⁴	R
143 N.	74 W.	4	Lot 1	27.40	R	D	D ⁴	R
			Lot 2	26.40	R	D	D ⁴	R
144 N.	74 W.	12	Lot 4	0.67	R	D	D ⁴	R
TOTAL ACREAGE				1520.00				
COUNTY: Logan								
136 N.	68 W.	30	NWNE	40.00	R	D	D ⁴⁶	R
134 N.	69 W.	14	NWNW	40.00	R	D	D ⁴⁶	R
			W2SW	80.00	R	D	D ⁴⁶	R
		34	NWNE	40.00	R	D	D ⁴⁶	R
			NENW	40.00	R	D	D ⁴⁶	R
135 N.	69 W.	28	N2NE	80.00	R	D	D ⁴⁵⁶	R
		32	NE	160.00	R	D	D ⁴⁶	R
136 N.	69 W.	8	SWNE	40.00	R	D	D ⁴⁶	R
135 N.	70 W.	8	NESWSWSW	2.50	R	D	D	R
TOTAL ACREAGE				522.50				

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
<i>COUNTY: McHenry</i>								
152 N.	75 W.	2	Lot 2	47.64	R	D	D	R
153 N.	75 W.	3	Lot 6	18.70	R	D	D ⁴⁶	R
		25	NESW	40.00	R	D	D ⁶	R
		31	Lot 2	14.30	R	D	D ⁴⁶	R
			Lot 4	15.40	R	D	D ⁴⁶	R
154 N.	75 W.	17	SESW	40.00	R	D	D ⁵	R
		18	Lot 4	38.22	R	D	D ⁵	R
			SESW	40.00	R	D	D ⁵	R
		19	NWNE	40.00	R	D	D ⁵	R
			W2	313.20	R	D	D ⁵	R
		30	Lot 3	38.12	R	D	D ⁵	R
155 N.	75 W.	6	SENE	40.00	R	D	D ⁶	R
		19	Lot 3	34.52	R	D	D ⁶	R
		23	S2NW	80.00	R	D	D ⁴⁶	R
			NESW	40.00	R	D	D ⁴⁶	R
			NWSE	40.00	R	D	D ⁴⁶	R
		29	W2NE	80.00	R	D	D	R
			E2NW	80.00	R	D	D	R
			N2SW	80.00	R	D	D ⁶	R
		31	NWSE	40.00	R	D	D	R
		33	NESW	40.00	R	D	D	R
157 N.	75 W.	15	SWSW	40.00	R	D	D	R
153 N.	76 W.	2	E2SW	80.00	R	D	D	R
154 N.	76 W.	24	NENE	40.00	R	D	D	R
		25	S2NE	80.00	R	D	D	R
			N2SE	80.00	R	D	D	R
		26	S2NE	80.00	R	D	D	R
		35	NENE	40.00	R	D	D	R
155 N.	76 W.	10	NESW	40.00	R	D	D	R
		14	SENE	40.00	R	D	D	R
		23	N2NW	80.00	R	D	D ⁶	R
			SENW	40.00	R	D	D	R
			NESW	40.00	R	D	D	R
			NWSE	40.00	R	D	D ⁶	R
152 N.	77 W.	23	SWNE	40.00	R	D	D ¹⁵⁶	R
153 N.	77 W.	23	SWSE	40.00	R	D	D ⁶	R
		25	E2SW	80.00	R	D	D ⁴⁶	R
154 N.	77 W.	3	Lot 1	39.04	R	D	D ⁵	R
			SENE	40.00	R	D	D ⁵	R
155 N.	77 W.	5	W2NE	80.42	R	D	D	R
		7	SWSE	40.00	R	D	D	R
		9	NWSE	40.00	R	D	D	R
		18	NENE	40.00	R	D	D	R
156 N.	77 W.	10	NWSW	40.00	R	D	D ⁶	R
		15	NWNE	40.00	R	D	D	R
		28	N2SW	80.00	R	D	D	R
			SWSW	40.00	R	D	D	R
			NWSE	40.00	R	D	D	R
		31	Lot 1	35.83	R	D	D ⁵	R
			Lot 2	35.51	R	D	D ⁵	R
151 N.	78 W.	23	NESE	40.00	R	D	D ⁴⁶	R
		24	NWNW	40.00	R	D	D ⁴⁵⁶	R
		35	Lot 1	2.06	R	D	D	R
152 N.	78 W.	15	SESW	40.00	R	D	D ⁴⁶	R
			SWSE	40.00	R	D	D ⁴⁶	R
		22	N2NE	80.00	R	D	D ⁴⁶	R
			S2NE	80.00	R	D	D ⁴⁶	R
			NW	160.00	R	D	D ⁴⁶	R
			N2SE	80.00	R	D	D ⁴⁶	R
TOTAL ACREAGE				3232.96				

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
<i>COUNTY: McIntosh</i>								
129 N.	68 W.	12	NWNE	40.00	R	D	D ⁴⁶	R
130 N.	68 W.	24	Lot 6	39.80	R	D	D ⁴⁶	R
			SWNE	40.00	R	D	D ⁴⁶	R
			NWSE	40.00	R	D	D ⁴⁶	R
132 N.	68 W.	20	NENE	40.00	R	D	D ⁴⁶	R
132 N.	72 W.	6	Lot 1	12.84	R	D	D ⁴	R
TOTAL ACREAGE				212.64				
<i>COUNTY: McKenzie</i>								
152 N.	93 W.	8	Lot 4	14.95	D	D	D	R
153 N.	94 W.	3	Lot 3	2.22	R	D	D ⁴	R
153 N.	93 W.	28	Lot 5	38.30	R	D	D ⁴	R
			Lot 6	31.40	R	D	D ⁴	R
			Lot 7	25.70	R	D	D ⁴	R
			Lot 8	16.50	R	D	D ⁴	R
			S2SW	80.00	R	D	D ⁴	R
149 N.	95 W.	1	Lot 1	48.10	D	D	D	R
		10	SESE	40.00	D	D	D	R
150 N.	95 W.	24	Lot 4	46.99	D	D	D	R
		25	Lot 1	47.11	D	D	D	R
152 N.	98 W.	5	Lot 10	40.00	R	D	D	R
			Lot 11	40.00	R	D	D	R
			Lot 12	40.00	R	D	D	R
153 N.	98 W.	24	SWSE	40.00	D	D	D ⁵	R
		25	W2NE	80.00	D	D	D ⁵	R
147 N.	99 W.	22	NWNW	40.00	D	D	D	R
149 N.	99 W.	35	NENE	40.00	D	D	D	R
151 N.	99 W.	6	Lot 5	38.25	D	D	D	
								R
152 N.	99 W.	7	Lot 3	37.60	D	D	D	R
		24	NWNE	40.00	D	D	D	R
152 N.	100 W.	24	SENW	40.00	D	D	D	R
			SWSW	40.00	D	D	D	R
			SESE	40.00	D	D	D	R
		25	W2NW	80.00	D	D	D	R
152 N.	100 W.	26	NENW	40.00	D	D	D	R
153 N.	100 W.	6	Lot 9	20.70	R	D	D ⁴	R
		18	Lot 3	39.85	D	D	D	R
			NESW	40.00	D	D	D	R
152 N.	101 W.	12	NWSE	40.00	D	D	D	R
		14	SWSW	40.00	D	D	D	R
			SESE	40.00	D	D	D	R
		22	SENW	40.00	D	D	D	R
153 N.	101 W.	10	SESE	40.00	D	D	D	R
149 N.	102 W.	17	NESE	40.00	D	D	D	R
152 N.	102 W.	21	Lot 5	1.01	D	D	D	R
152 N.	103 W.	13	Lot 6	25.00	D	D	D ²	R
			Lot 7	31.10	D	D	D ²	R
		14	Lot 5	3.75	D	D	D ²	R
		24	SESW	40.00	D	D	D	R
151 N.	104 W.	26	Lot 1	9.00	D	D	D	R
			Lot 4	31.70	D	D	D	R
		35	SWNE	10.00	D	D	D	R
			(portion north of RR)					
152 N.	104 W.	21	Lot 7	17.50	D	D	D ²	R
		22	Lot 3	6.60	D	D	D ²	R
			Lot 4	10.00	D	D	D ²	R
		27	Lot 3	1.63	D	D	D ²	R
		30	Lot 1	34.13	D	D	D	R
TOTAL ACREAGE				1629.09				

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
<i>COUNTY: McLean</i>								
150 N.	79 W.	26	SEnw	40.00	R	D	D	R
143 N.	81 W.	6	Lot 1	15.84	R	D	D ⁴	R
			Lot 2	4.29	R	D	D ⁴	R
		18	Lot 3	23.50	R	D	D ⁴	R
		30	Lot 1	2.40	R	D	D ⁴	R
148 N.	81 W.	19	Lot 9	1.80	R	D	D ⁴	R
144 N.	83 W.	30	Lot 4	42.10	R	D	D ⁴	R
144 N.	84 N.	8	Lot 1	20.60	R	D	D ²	R
			Lot 2	25.60	R	D	D ²	R
			Lot 3	17.80	R	D	D ²	R
145 N.	84 W.	34	Lot 3	15.60	R	D	D ²	R
			Lot 4	15.00	R	D	D ²	R
146 N.	84 W.	32	Lot 1	25.58	R	D	D ²	R
			Lot 4	26.22	R	D	D ²	R
			Lot 5	33.13	R	D	D ²	R
			Lot 8	9.74	R	D	D ²	R
149 N.	84 W.	11	E2SW	80.00	R	D	D ⁴⁶	R
150 N.	84 W.	27	NWSE	40.00	R	D	D ⁴⁵⁶	R
150 N.	85 W.	1	Lot 1	0.20	R	D	D ¹	R
150 N.	86 W.	21	NESE	40.00	R	D	D ⁴⁵⁶	R
		22	S2NW	80.00	R	D	D ⁴⁵⁶	R
			NWSW	40.00	R	D	D ⁴⁵⁶	R
TOTAL ACREAGE				599.40				
<i>COUNTY: Mercer</i>								
144 N.	84 W.	14	Lot 5	17.40	R	D	D ²	R
			Lot 6	14.10	R	D	D ²	R
			Lot 7	16.80	R	D	D ²	R
			Lot 8	15.70	R	D	D ²	R
		24	Lot 5	12.60	R	D	D ²	R
			Lot 6	41.70	R	D	D ²	R
			Lot 7	20.50	R	D	D ²	R
			Lot 8	25.90	R	D	D ²	R
			W2SW	80.00	R	D	D ²	R
146 N.	84 W.	18	Lot 2	12.54	R	D	D ²	R
			Lot 3	17.88	R	D	D ²	R
			Lot 6	25.44	R	D	D ²	R
			Lot 7	38.45	R	D	D ²	R
146 N.	87 W.	6	SEnw	40.00	R	D	D	R
143 N.	89 W.	34	NWSW	40.00	R	D	D	R
142 N.	90 W.	4	NESW	40.00	R	D	D	R
TOTAL ACREAGE				459.01				
<i>COUNTY: Morton</i>								
134 N.	80 W.	24	Lot 10	17.40	R	D	D ⁴	R
		28	Lot 12	2.40	R	D	D	R
137 N.	79 W.	33	Lot 4	19.70	R	D	D ⁴	R
137 N.	80 W.	9	Lot 9	24.30	R	D	D ²	R
		18	Lot 7	1.00	R	D	D ²	R
135 N.	81 W.	6	Lot 6	34.84	R	D	D	R
			NESW	40.00	R	D	D	R
		24	Lot 1	5.02	R	D	D ²	R
133 N.	82 W.	22	Lot 7	15.96	R	D	D ²	R
138 N.	85 W.	2	Lot 1	38.79	R	D	D ⁵	R
TOTAL ACREAGE				199.41				

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
<i>COUNTY: Mountrail</i>								
155 N.	88 W.	20	Lot 4	6.87	R	D	D ⁴⁶	R
156 N.	88 W.	17	SWNE	40.00	R	D	D ¹⁶	R
156 N.	89 W.	3	SENW	40.00	R	D	D ⁶	R
		7	Lot 1	7.10	R	D	D ⁴⁶	R
			Lot 2	8.70	R	D	D ⁴⁶	R
		27	NWNE	40.00	R	D	D ⁶	R
157 N.	89 W.	29	Lot 1	16.80	R	D	D ⁴⁶	R
		32	Lot 1	1.10	R	D	D ⁴	R
152 N.	90 W.	5	SWSE	40.00	R	D	D ⁶	R
153 N.	90 W.	20	NENE	40.00	R	D	D ⁶	R
156 N.	90 W.	20	SESW	40.00	R	D	D ⁴⁶	R
			SWSE	40.00	R	D	D ⁴⁶	R
158 N.	90 W.	18	SENE	40.00	R	D	D ¹⁶	R
154 N.	91 W.	4	Lot 4	40.05	R	D	D ⁶	R
			SWNE	40.00	R	D	D ⁶	R
			NWSW	40.00	R	D	D ⁶	R
155 N.	91 W.	7	NWSE	40.00	R	D	D ⁶	R
156 N.	91 W.	5	Lot 4	60.55	R	D	D ⁴⁶	R
		13	W2NE	80.00	R	D	D ⁴⁶	R
157 N.	91 W.	34	Lot 2	17.30	R	D	D ⁴⁶	R
154 N.	92 W.	31	Lot 1	38.85	R	D	D ⁶	R
153 N.	93 W.	13	SESW	40.00	R	D	D ⁶	R
		26	SENE	40.00	R	D	D	R
			NESE	40.00	R	D	D	R
154 N.	94 W.	10	NESW	40.00	R	D	D ⁶	R
		20	NWNW	40.00	R	D	D ⁶	R
		25	NWSW	40.00	R	D	D	R
155 N.	94 W.	15	SWNE	40.00	R	D	D ⁶	R
		35	SWNW	40.00	R	D	D ⁶	R
TOTAL ACREAGE				1037.32				
<i>COUNTY: Oliver</i>								
141 N.	81 W.	2	Lot 4	14.50	R	D	D ⁴	R
		12	Lot 7	23.50	R	D	D ²	R
144 N.	83 W.	32	Lot 5	4.26	R	D	D ²⁵	R
			Lot 6	8.87	R	D	D ²⁵	R
			Lot 7	20.94	R	D	D ²⁵	R
			Lot 8	40.38	R	D	D ²⁵	R
TOTAL ACREAGE				112.45				
<i>COUNTY: Pierce</i>								
157 N.	72 W.	18	NWNE	40.00	R	D	D	R
		23	Lot 5	0.32	R	D	D ⁴⁶	R
152 N.	73 W.	5	Lot 10	0.15	R	D	D ⁴⁶	R
		21	NWNW	40.00	R	D	D	R
152 N.	74 W.	8	Lot 1	4.57	R	D	D ⁴⁵⁶	R
			Lot 5	24.50	R	D	D ⁴⁵⁶	R
			Lot 6	16.80	R	D	D ⁴⁵⁶	R
154 N.	74 W.	30	NESW	40.00	R	D	R ⁴⁶	R
TOTAL ACREAGE				166.34				
<i>COUNTY: Renville</i>								
158 N.	86 W.	30	Lot 2	38.31	R	D	D	R
		33	SWNW	40.00	R	D	D	R
TOTAL ACREAGE				78.31				
<i>COUNTY: Sheridan</i>								
145 N.	74 W.	26	SENE	40.00	R	D	D ⁴⁶	R
			NESE	40.00	R	D	D ⁴⁶	R
150 N.	75 W.	14	S2NW	80.00	R	D	D ⁴⁶	R

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
149 N.	77 W.	2	Lot 7	13.40	R	D	D ⁴⁶	R
150 N.	77 W.	13	Lot 1	17.70	R	D	D ⁴⁶	R
		17	SWSW	40.00	R	D	D ⁴⁶	R
		20	Lot 1	11.40	R	D	D ⁴⁶	R
			Lot 2	9.50	R	D	D ⁴⁶	R
		28	Lot 2	32.30	R	D	D ⁴⁶	R
		35	Lot 2	13.70	R	D	D ⁴⁶	R
147 N.	78 W.	1	Lot 3	40.20	R	D	D	R
148 N.	78 W.	23	SWNE	40.00	R	D	D	R
TOTAL ACREAGE				378.20				
<i>COUNTY: Stutsman</i>								
138 N.	67 W.	8	NENW	40.00	R	D	D ⁴⁶	R
138 N.	68 W.	10	SWSE	40.00	R	D	D ⁴⁶	R
TOTAL ACREAGE				80.00				
<i>COUNTY: Walsh</i>								
157 N.	50 W.	8	Lot 1	10.94	R	D	D ⁵	R
TOTAL ACREAGE				10.94				
<i>COUNTY: Ward</i>								
151 N.	84 W.	29	NESW	40.00	R	D	D ⁴⁶	R
153 N.	86 W.	4	Lot 4	0.93	R	D	D ⁴	R
		5	Lot 1	22.20	R	D	D ⁴⁶	R
			Lot 5	25.60	R	D	D ⁴⁶	R
		7	Lot 2	0.37	R	D	D ⁴	R
152 N.	87 W.	1	Lot 6	16.50	R	D	D ⁴⁶	R
		4	SESW	40.00	R	D	D ⁴⁶	R
		9	NENW	40.00	R	D	D ⁴⁶	R
155 N.	87 W.	8	NWSW	40.00	R	D	D ⁴⁶	R
159 N.	87 W.	32	NESW	40.00	R	D	D	R
TOTAL ACREAGE				265.60				
<i>COUNTY: Williams</i>								
154 N.	95 W.	7	Lot 2	36.81	D	D	D ⁵	R
			Lot 3	36.87	D	D	D ⁵	R
			Lot 4	36.93	D	D	D ⁵	R
		10	N2SE	80.00	D	D	D ⁶	R
		28	SENW	40.00	R	D	D ⁴	R
154 N.	96 W.	12	SENE	40.00	D	D	D ⁵	R
			NESE	40.00	D	D	D ⁵	R
154 N.	97 W.	17	SWNE	40.00	D	D	D ⁶	R
155 N.	97 W.	21	SESE	40.00	R	D	D ⁶	R
154 N.	100 W.	33	SESE	40.00	D	D	D ⁶	R
159 N.	100 W.	22	SENE	40.00	D	D	D ⁴⁵⁶	R
			SENW	40.00	D	D	D ⁴⁵⁶	R
			NESW	40.00	D	D	D ⁴⁵⁶	R
			S2SW	80.00	D	D	D ⁴⁵⁶	R
			N2SE	80.00	D	D	D ⁴⁵⁶	R
			SWSE	40.00	D	D	D ⁴⁵⁶	R
154 N.	101 W.	29	SWSE	10.00	D	D	D ²⁶	R
(Portion north of RR)								
156 N.	102 W.	14	NESW	40.00	R	D	D ⁶	R
			NWSE	40.00	R	D	D ⁶	R
152 N.	103 W.	20	Lot 1	37.00	D	D	D ²	R
			Lot 3	14.00	D	D	D ²	R
		21	Lot 5	22.00	D	D	D ²	R
153 N.	103 W.	9	NWNE	40.00	D	D	D ⁶	R
		26	SWNW	40.00	D	D	D ⁵⁶	R
			NESW	40.00	D	D	D ⁵⁶	R

TABLE D-1 (cont.)
INITIAL CATEGORIZATION OF PUBLIC LANDS, BY ALTERNATIVE

T.	R.	Sec.	Subdivision	Acreage	Altern. A No Action	Altern. B	Altern. C	Altern. D
152 N.	104 W.	27	NESW	40.00	D	D	D ⁵⁶	R
		5	SWSW	30.27	R	D	D	R
		(portion of)						
		14	Lot 1	40.30	D	D	D ²	R
			Lot 2	27.00	D	D	D ²	R
			Lot 3	20.90	D	D	D ²	R
		15	Lot 1	14.75	D	D	D ²	R
			Lot 2	16.10	D	D	D ²	R
		20	Lot 4	8.10	D	D	D ²	R
		21	Lot 4	11.00	D	D	D ²	R
		23	Lot 1	3.31	D	D	D ²	R
		24	Lot 2	11.80	D	D	D ²	R
			Lot 3	34.25	D	D	D ²	R
153 N.	104 W.	10	Lot 1	29.91	D	D	D ⁶	R
TOTAL ACREAGE				1321.30				

¹Identified as suitable for mitigating impacts of Garrison Diversion projects.

²Need a cadastral survey determination of acreage and land status.

³Located within Big Gumbo or Lost Bridge consolidation areas. Available for exchange for other lands within either consolidation area.

⁴These areas contain or are adjacent to wetlands. Disposal would be contingent on protection of important wetlands values.

⁵Contain sensitive resources identified by NDGFD and NDPRD.

⁶Included in Civil Action No. 85-2238, National Wildlife Federation versus Robert Burford. Action on this tract is pending court ruling.

TABLE D-2
DISPOSAL AND RETENTION ACREAGES FOR EACH ALTERNATIVE BY COUNTY

	Alternative A		Alternative B		Alternative C		Alternative D	
	Dispose	Retain	Dispose	Retain	Dispose	Retain	Dispose	Retain
Adams	40.00	0.00	40.00	0.00	40.00	0.00	0.00	40.00
Barnes	0.00	4.56	4.56	0.00	4.56	0.00	0.00	4.56
Benson	0.00	89.44	89.44	0.00	89.44	0.00	0.00	89.44
Billings	680.00	0.00	680.00	0.00	680.00	0.00	0.00	680.00
Bottineau	0.00	0.05	0.05	0.00	0.05	0.00	0.00	0.05
Bowman	5105.24	27474.40	11077.39	21502.25	3958.42	28621.22	0.00	32579.64
Burleigh	0.00	862.96	862.96	0.00	862.96	0.00	0.00	862.96
Cavalier	0.00	239.44	239.44	0.00	239.44	0.00	0.00	239.44
Divide	120.00	1545.63	1665.63	0.00	260.80	1404.83	0.00	1665.63
Dunn	585.16	15404.06	8599.71	7389.51	1182.82	14806.40	0.00	15989.22
Eddy	0.00	53.85	53.85	0.00	53.85	0.00	0.00	53.85
Emmons	0.00	599.25	599.25	0.00	599.25	0.00	0.00	599.25
Golden Valley	0.00	2358.01	2358.01	0.00	2358.01	0.00	0.00	2358.01
Grand Forks	0.00	40.00	40.00	0.00	40.00	0.00	0.00	40.00
Grant	583.75	0.00	583.75	0.00	583.75	0.00	0.00	583.75
Kidder	0.00	1520.00	1520.00	0.00	1520.00	0.00	0.00	1520.00
Logan	0.00	522.50	522.50	0.00	522.50	0.00	0.00	522.50
McHenry	0.00	3232.96	3232.96	0.00	3232.96	0.00	0.00	3232.96
McIntosh	0.00	212.64	212.64	0.00	212.64	0.00	0.00	212.64
McKenzie	1294.27	334.82	1629.09	0.00	1629.09	0.00	0.00	1629.09
McLean	0.00	599.40	599.40	0.00	599.40	0.00	0.00	599.40
Mercer	0.00	459.01	459.01	0.00	459.01	0.00	0.00	459.01
Morton	0.00	159.41	159.41	0.00	159.41	0.00	0.00	159.41
Mountrail	0.00	1037.32	1037.32	0.00	1037.32	0.00	0.00	1037.32
Oliver	0.00	112.45	112.45	0.00	112.45	0.00	0.00	112.45
Pierce	0.00	166.34	166.34	0.00	166.34	0.00	0.00	166.34
Renville	0.00	78.31	78.31	0.00	78.31	0.00	0.00	78.31
Sheridan	0.00	378.20	378.20	0.00	378.20	0.00	0.00	378.20
Stutsman	0.00	80.00	80.00	0.00	80.00	0.00	0.00	80.00
Walsh	0.00	10.94	10.94	0.00	10.94	0.00	0.00	10.94
Ward	0.00	265.60	265.60	0.00	265.60	0.00	0.00	265.60
Williams	1131.03	190.27	1321.30	0.00	1321.30	0.00	0.00	1321.30
GRAND TOTALS	9539.45	58031.82	38679.51	28891.76	22738.82	44832.45	0.00	67571.27

Federal surface presence would be maintained in the following number of counties under each alternative.

Alternative A — 29
 B — 2
 C — 3
 D — 32

